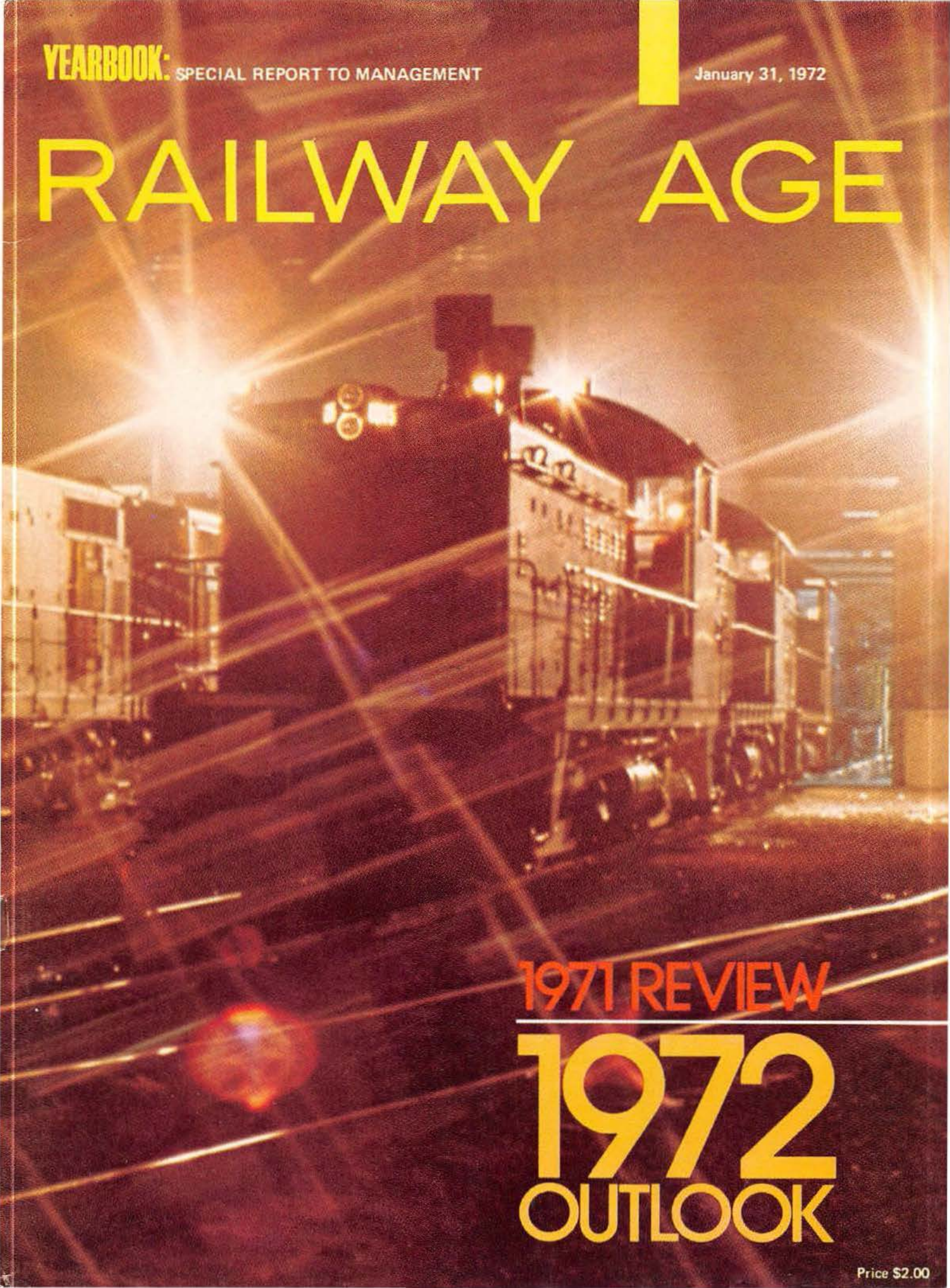
YEARBOOK: SPECIAL REPORT TO MANAGEMENT

January 31, 1972

RAILWAY AGE

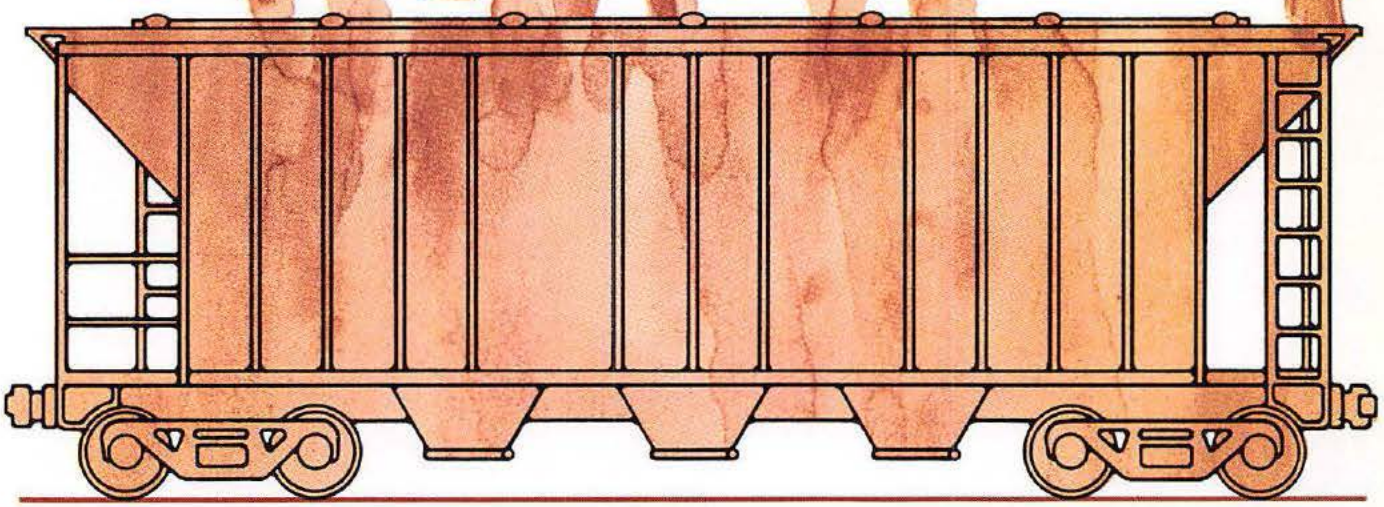


1971 REVIEW

1972 OUTLOOK

Price $2.00

CORROSION CORRODES PROFITS



fight it with CARHIDE®

ACID AND ALKALI RESISTANT VINYL FINISHES

The relentless corrosive attack on railroad rolling stock, whether from the material being transported or from external environmental influences, is of major concern to those seeking ways and means to lower maintenance costs and protect profits.

Carhide Acid and Alkali Resistant Vinyl Finishes extend the metal life of hopper and tank cars by providing a protective plastic film which is resistant to strong alkalies, inorganic acids, industrial atmospheres and fresh and salt water.

The superior adhesion and flexibility of *Carhide* Vinyl Coatings virtually eliminate cracking from metal expansion and contraction and give the finish superior impact resistance.

Primarily a protective exterior coating for covered hopper and tank cars, *Carhide* A & A Finishes are also applicable wherever resistance to chemical attack is required on other types of rolling vehicles and storage vessels.

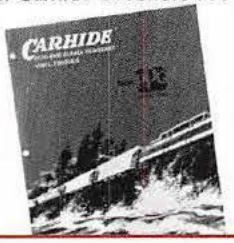
To lengthen the life of freight cars, to reduce the cost of maintenance and to protect profits, coat your cars with *Carhide* A & A Vinyl Finishes—proven effective through the years. For additional information please mail the coupon below.

PPG: *a Concern for the Future*

MEMBER RPI

PPG INDUSTRIES

Mail this coupon for *Carhide* Brochure . . .



PPG INDUSTRIES, INC., 1 Gateway Center, 16W, Pittsburgh, Pa. 15222.

Please send me information regarding:

☐ *Carhide* Acid and Alkali Resistant Vinyl Finishes
☐ Other Railway Maintenance Finishes

Name_____

Company_____

Address_____

City_____ State_____ Zip_____

Circle 1 on coupon page 83

RAILWAY AGE

January 31, 1972 • Vol. 172 No. 2

Editorial and Executive Offices
New York, N.Y. 10013, 350 Broadway
(212) 966-7700

ROBERT G. LEWIS: Publisher
LUTHER S. MILLER: Editor
FRED C. MILES: Executive Editor

Mechanical: Fred N. Houser
Art Director: Maurice H. Mates
Editorial Assistant: June Meyer
Librarian: Edith C. Stone
Production Manager: Fred B. Hecht
Manager—Contract Department:
Constance Nicolai
Promotion Director: George Dusenbury

Editorial and Executive Offices
Chicago, Ill. 60602, 29 E. Madison St.
(312) 641-5815

C. JAMES FISHER: Vice President—Sales
GUS WELTY: Senior Editor

Mechanical: Robert D. Bartley
Engineering:
Merwin H. Dick R.E. Dove
Signaling & Communications:
Robert W. McKnight
Editorial Assistant: Wanda Brown

Washington, D.C. 20004,
National Press Bldg. (202) 347-1155
Washington Editor: Reid Beddow

Brighton, Sussex, England
8 St. George's Place, (Brighton 685867)
International Editors:
John Levett Paul Goldsack

Advertising Sales Offices:
See Advertising Index

Railway Age, established in 1856, is indexed by the Business Periodicals Index and the Engineering Index Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published semi-monthly by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $6 one year, $9 two years, all others $15 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year; in the eastern hemisphere, $15 a year. Single copies 60¢, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 530, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Member of ABC RPI

Circulation Dept.: John Rogers Director of Circulation, 350 Broadway, New York, N.Y. 10013. POSTMASTER—SEND FORM 3579 TO P.O. BOX 530, BRISTOL, CONN. 06010.

Printed at the Hughes Printing Co., 34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

supporting ASTRO

Inside

LUTHER MILLER

THE WSJ STRIKES AGAIN

Eighteen months ago the Wall Street Journal published an astonishing lead news story on page 1 which said that Britain's nationalized railway system was making money by providing good passenger service. The story was astonishing because it was not true. British Railways actually lost several hundred million dollars that year, as we reported in a reply to the WSJ's article. To its credit, that paper a few weeks later printed an editorial agreeing that nationalization was not, after all, the "miracle solution" that bad arithmetic might make it appear to be.

Now the WSJ has done it again. The lead story which appeared on page 1 of its Jan. 6 editions—piecing together the honest fears of many people that U.S. railroads may be headed for the takeover route—was not, paragraph for paragraph, inaccurate. But WSJ's headline writer added up 2 and 2 and got 5: "Government Chugging Toward Nationalization of America's Railroads."

The main basis for this seems to have been a statement which the Wall Street Journal attributed to a DOT official. "It's conceivable," Under Secretary James M. Beggs was quoted as saying, "that we will propose some kind of nationalization."

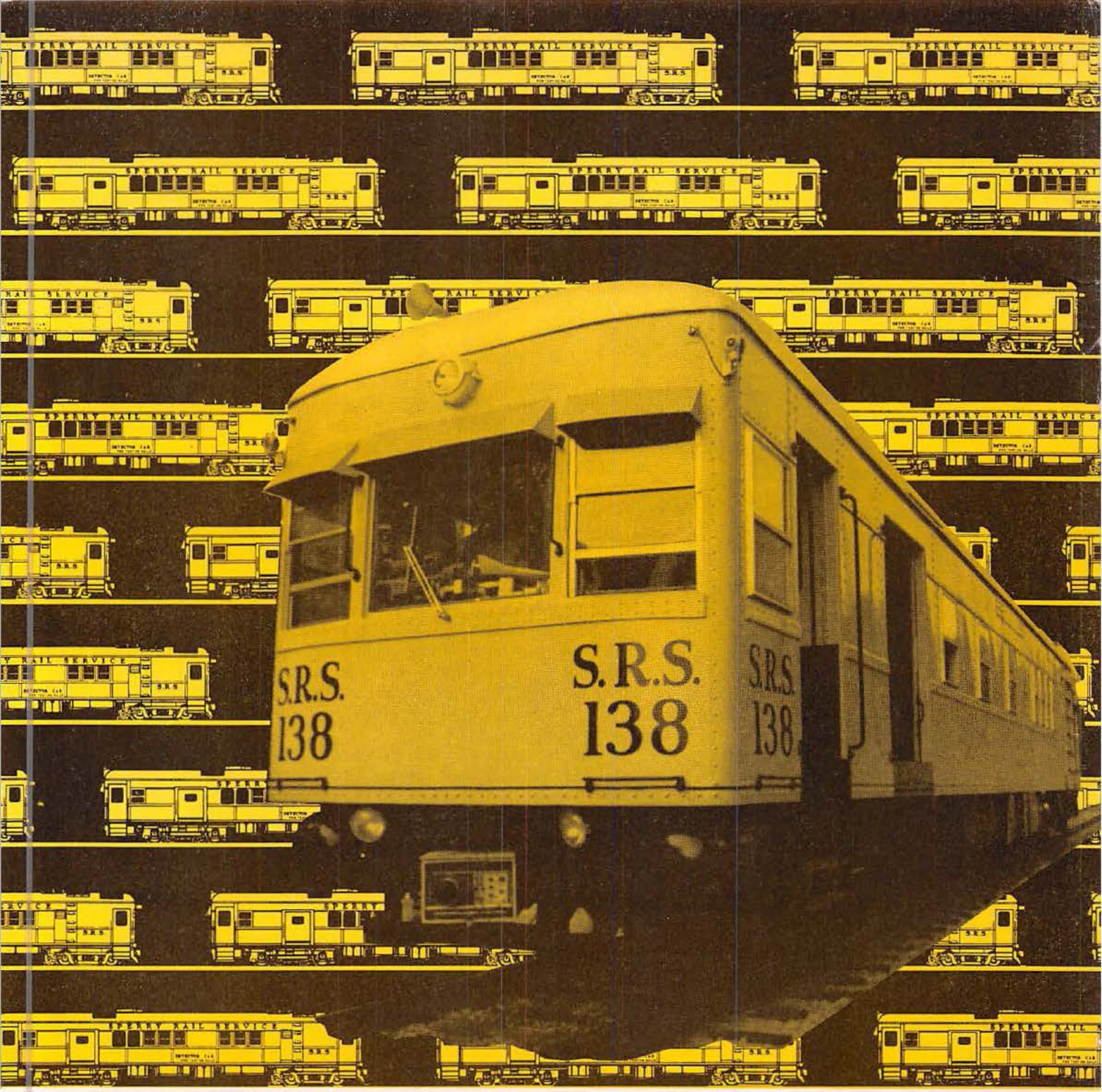
Of course it's "conceivable." We have been saying that for years. The conceivability of nationalization is why three different studies of it have now been undertaken (by the DOT, the ICC, and the Senate Commerce Committee).

But the Wall Street Journal's article leaves the unfortunate impression that "conceivable" is all but synonymous with "inevitable." It cries out for reply.

SETTING THE RECORD STRAIGHT

Our own reply will be in two parts. The first part appears in this issue of our magazine. Railway Age asked the leading Presidential candidates for their own views on (1) nationalization and (2) how they feel it can be avoided. Their replies are published in the special news report which begins on page 11. (In point of fact, this entire Review & Outlook issue, examining what railroads did accomplish in 1971 and what they are likely to do in 1972, presents a far more realistic picture of the industry than that which the WSJ's excited reporter painted.)

The second and main part of our reply will take the form of a special issue of this magazine of which the theme will be: "Nationalization: Myth vs Truth." We are going to examine the arguments *for* nationalization, in terms not of what *may* happen but of what *has* happened in those countries which have tried it. The documentation which this kind of report requires takes time; our special issue on this subject will be dated March 27.



COMING THROUGH... to meet increased rail testing demands

Sperry Rail Service's detector car fleet is expanding to assure that rail testing requirements are met with the latest equipment operated by the most experienced crews. Car 138 is now in operation, soon to be followed by Car 139, twentieth member of the fleet of modern rail detector cars. Keeping pace with industries' needs is just one more reason why leading railroads continue to rely on Sperry Rail Service for efficient economical, end-to-end rail testing.

AUTOMATION INDUSTRIES, INC.
SPERRY DIVISION

SHELTER ROCK ROAD
DANBURY, CONNECTICUT 06810 U.S.A.
(203) 748-3581

Circle 3 on coupon page 38

RAILWAY AGE

January 31, 1972

NEWS

NATIONALIZATION?	"No!" say leading Presidential contenders	p. 11
FREIGHT CARS	Orders were up in 1971	p. 8
	Pullman sees bigger market in the offing	p. 97
FINANCIAL	Santa Fe posts a strong '71 showing	p. 8
	Katy was near break-even in 1971	p. 8
	Southern sets new records for 1971	p. 15
	N&W chief appraises role of labor productivity	p. 97
PEOPLE	Illinois Central Gulf management is set	p. 8
	Wanaselja leaves Amtrak	p. 8
	Now, it's Charles Luna, shipper	p. 8
MOVING FREIGHT	Penn Central creates an Intermodal Division	p. 95
	Rate increases generate improvement funds	p. 104
BIRTHDAYS	CF&I Steel Corp. celebrated its 100th on Jan. 11	p. 8

FEATURES

1972 OUTLOOK	Does this look like an industry headed for nationalization?	p. 29
	Car orders should top 70,000 this year	p. 33
	Locomotives: They'll be better before they're bigger	p. 37
	Signaling—Safety will be a big plus	p. 41
	M/W: Bigger programs planned for this year	p. 45
	Labor: "We have 18 months to sit down and talk things out"	p. 48
	Legislation: Congress will help—but when?	p. 50
1971 REVIEW	It was not a year of solutions. But a start was made	p. 66
	Car and locomotive orders; signaling and M/W statistics	p. 86

COMMENT

INSIDE	The Wall Street Journal strikes again	p. 5
LINES ON LABOR	More participation by employees?	p. 15
VIEWPOINT	Mr. Nixon's lukewarm plea for railroads	p. 108
WATCHING WASHINGTON	An important date: May 1	p. 60

COVER

This week's cover photo was supplied by the Missouri Pacific.

DEPARTMENTS

Advertising Sales Offices	p. 107	New Products	p. 83
Carloadings	p. 103	People in the News	p. 98
Market Outlook	p. 103	Supply Trade	p. 98

Attend one of our ACI SEMINARS...

We'll help you enlarge both your technical and operating knowledge of this extraordinary management tool!

We cordially invite your attendance. First class will be held Tuesday, February 29, 8:30 AM to 5:30 PM, at our South Holland headquarters. Subsequent sessions will be held on the last Tuesday of each month, through December, at South Holland.

All classes will be from 8:30 AM to 5:30 PM and each will be **a complete one-day course,** equally devoted to technical presentations and the latest practical applications for terminal control in rail, piggyback and marine operations.

All of us at ACIS feel we should contribute to the industry from an educational and training standpoint. With this goal in mind, we've designed our ACI Seminar Classes to be a vital and timely contribution to the railroad industry. They are directed toward all who are engaged in operating; signal and communication; data processing; industrial engineering; and operations research. These Seminars will be conducted at no cost to you.

Our faculty will be comprised of our highly qualified staff of research, engineering and systems people. Each class will be limited to ten participants.

Please let me have your attendance request right away and be sure to tell me which class date you prefer. We will be happy to reserve your hotel accommodations and arrange transportation to and from the airport. If possible, we'd like at least 30 days advance notice. Write to me personally –

W. H. Thompson
President

ACI Systems Corp.

Headquarters: S. Holland, Ill. 60473
520 Armory Dr. Phone 312-331-6203
Inbound Wats 800-323-7061

Atlanta, Ga. 30303
Phone: (404) 522-5006

Westwood, Mass. 02090
Phone: (617) 326-8960

Circle 8 on coupon page 83

the front-runner in the race for the Democratic nomination, said nationalization "would simply transfer ownership and operation—and all the present problems—of the rail lines to the public, and at a heavy cost to American taxpayers. It would severely limit the funds needed for new capital investment," Muskie added, "since publicly-owned railroads would have to compete for funds with other major domestic spending priorities such as education, housing and health care."

As a means of helping the railroads help themselves, Muskie endorsed a pending bill, S. 1731, which he said would help the industry to modernize its rolling-stock fleet without turning over any of its management prerogatives to the government.

Senator Humphrey suggested that the Federal government might consider "direct control of the roadbeds utilized by the railroad industry, thus treating railroads as it treats other forms of commercial transportation." Obviously remembering his close ties with labor, Humphrey took pains to say that whatever is done, present railroad employees should be protected.

Senator Hartke, who is chairman of the Senate Surface Transportation Subcommittee, elaborated on the position which he had stated several weeks ago in an interview with Railway Age (RA, Oct. 25, 1971, p. 36). While strongly opposing nationalization, he suggested that a study of takeover may help to develop acceptable alternatives.

Senator Jackson, declaring that nobody would benefit from nationalization, said he nonetheless feared that Penn Central might have to go this route, a victim of the Administration's failure to restore the national economy to health.

The full texts of the candidates' statements to Railway Age follow:

SENATOR EDMUND S. MUSKIE:

Nationalization of the American railroad industry would be highly undesirable, although that seems to be the direction in which we are tending. Nationalization is not inevitable if the American public and the transportation industry will face up to the real problems affecting the industry. Efficient and economical rail transportation service can and, I think, must be provided by the private sector responding to real market forces.

There is no question that the adequacy and efficiency of rail transportation service have diminished in the past few years and in some instances continue to worsen. But nationalization or government operation would not create the new facilities which the industry needs so badly. Rather, such action would simply transfer ownership and operation—and all the present problems—of the rail lines to the public, and at a heavy cost to American taxpayers. It would severely limit the funds needed for new capital investments, since publicly-owned railroads would have to compete for funds with other major domestic spending priorities such as education, housing and health care.

Muskie: "We must come

Just as there is not one simple explanation for the sad financial condition of many American railroad enterprises, there is no single, simple solution to their problems. It is clear, however, that much of the past government intervention in the railroad industry has served neither the interests of the public nor of the industry. Where the government has regulated and controlled the industry, it often has done so unwisely. And some matters which should have been the subject of careful government scrutiny have been ignored by the regulators. Management bears its fair share of the responsibility, too, for waking up too late in some instances to the challenges faced by the industry in a changinng world, and in a few cases, for outright mismanagement.

Our short-run actions necessarily must deal with the symptoms of the current crises, but we must also begin to come to grips with the fundamental causes of those problems as well.

I think Senator Magnuson's bill, S. 1731, which would permit the government to guarantee private loans to railroads for the purchase of rolling stock, is a good example of the way in which government resources should be used to help the private sector do those jobs which the private sector does best. This bill would allow expansion and modernization of present equipment by individual carriers which know their needs, without requiring governmental outlays of scarce public funds. It would also avoid governmental operation of the railroads or government intervention in management decisions and does not even require the establishment of a new government agency.

Over the longer term, we must begin to evolve a more realistic regulatory environment which will both promote the public interest and facilitate efficient, economical and profitable operation of the railroads.

With mutual confidence and a shared goal of efficient, first class rail service, I believe we can develop a system which leaves to government and to the rail industry those responsibilities which each performs best.

RAILWAY AGE

January 31, 1972

NEWS

NATIONALIZATION?	"No!" say leading Presidential contenders	p. 11
FREIGHT CARS	Orders were up in 1971	p. 8
	Pullman sees bigger market in the offing	p. 97
FINANCIAL	Santa Fe posts a strong '71 showing	p. 8
	Katy was near break-even in 1971	p. 8
	Southern sets new records for 1971	p. 15
	N&W chief appraises role of labor productivity	p. 97
PEOPLE	Illinois Central Gulf management is set	p. 8
	Wanaselja leaves Amtrak	p. 8
	Now, it's Charles Luna, shipper	p. 8
MOVING FREIGHT	Penn Central creates an Intermodal Division	p. 95
	Rate increases generate improvement funds	p. 104
BIRTHDAYS	CF&I Steel Corp. celebrated its 100th on Jan. 11	p. 8

FEATURES

1972 OUTLOOK	Does this look like an industry headed for nationalization?	p. 29
	Car orders should top 70,000 this year	p. 33
	Locomotives: They'll be better before they're bigger	p. 37
	Signaling—Safety will be a big plus	p. 41
	M/W: Bigger programs planned for this year	p. 45
	Labor: "We have 18 months to sit down and talk things out"	p. 48
	Legislation: Congress will help—but when?	p. 50
1971 REVIEW	It was not a year of solutions. But a start was made	p. 66
	Car and locomotive orders; signaling and M/W statistics	p. 86

COMMENT

INSIDE	The Wall Street Journal strikes again	p. 5
LINES ON LABOR	More participation by employees?	p. 15
VIEWPOINT	Mr. Nixon's lukewarm plea for railroads	p. 108
WATCHING WASHINGTON	An important date: May 1	p. 60

COVER

This week's cover photo was supplied by the Missouri Pacific.

DEPARTMENTS

Advertising Sales Offices	p. 107	New Products	p. 83
Carloadings	p. 103	People in the News	p. 98
Market Outlook	p. 103	Supply Trade	p. 98

Short and Significant

FREIGHT-CAR ORDERS UP IN 1971

Orders for 3,933 new freight cars in December brought the total for 1971 to 52,482, up nearly 5% over 1970. The American Railway Car Institute and AAR reported that in December orders were placed for 3,633 new cars with builders and for 300 with company shops; for 1971 the totals were 46,913 with builders and 5,569 with company shops. During 1971 commercial shops produced 47,990 new cars while 4,785 were turned out in company shops for a total of 52,775. The backlog of cars ordered but undelivered on Jan. 1, 1972, was 22,221, down from 27,558 a year earlier.

SANTA FE POSTS A STRONG '71 SHOWING

With revenues of close to $900 million and with operating expenses going up by less than 1%, Santa Fe is reporting net income before extraordinary items of $66.6 million for 1971, up from $49.2 million in 1970. Fourth-quarter net was up sharply, Santa Fe says, due principally to restoration of the 7% investment tax credit. Extraordinary charges last year were also up sharply, reflecting Amtrak-related items. As a result, SFI GAAP net for the year was down somewhat, from $40.2 million in 1970 to $33.1 million.

A&S BOUNCES BACK FROM TANKER BLAST

More than 175 persons suffered injuries (most of them minor) and property damage was heavy Jan. 22 when a tank car reportedly loaded with propylene exploded in the East St. Louis, Ill., yard of Alton & Southern. There were no deaths. Within the yard itself, 30 to 40 freight cars were destroyed, between 100 and 150 were damaged and several yard structures sustained damage. Repair forces had the yard back in full operation by the afternoon of Jan. 23. Federal and railroad authorities are continuing an investigation.

KATY RAILROAD NEAR BREAK-EVEN

Jacob Saliba, president of Katy Industries, says the company's railroad operations "were near break-even for 1971, and we are budgeting an operating profit for this subsidiary in 1972." For the parent company as a whole, Saliba is predicting 1971 earnings in excess of $7 million, derived 37% from the Industrial Products Group; 32% from Consumer Products; 16% from Electrical Products; and 15% from Oil Field Service. Wallace E. Carroll, board chairman, has reported that the company is "in the final stages of negotiations on six new acquisitions which will add approximately $3.5 million of pretax earnings."

ILLINOIS CENTRAL GULF MANAGEMENT SET

When Illinois Central Gulf comes into being, it will be with Gulf, Mobile & Ohio President Glen P. Brock as chairman and Illinois Central President Alan S. Boyd as president and chief executive officer. William B. Johnson, chairman and chief executive officer of IC, will be chairman of ICG's executive committee. IC/GM&O merger was approved by the ICC late last December (RA, Jan. 10, p. 17).

WANASELJA LEAVES AMTRAK

Amtrak Operations Vice President Harold Wanaselja has resigned, effective Feb. 1, to enter private consulting work. Formerly with New York's Metropolitan Transportation Authority, Wanaselja is the first Amtrak officer to leave his post since Chairman Roger Lewis installed his management team last year. J. Richard Tomlinson has been appointed executive vice president of Amtrak. Tomlinson was a Reading vice president and partner in a consulting firm prior to his new appointment.

NOW CHARLES LUNA, SHIPPER

UTU President Emeritus Charles Luna, who also is an Amtrak director, donned a third hat Jan. 26 when Stirling Homex Corp. of Avon, N.Y., the modular housing manufacturer, announced his appointment as vice president and director of transportation. Stirling Homex was the first builder to ship housing units by rail, now leases a fleet of 55 special flat cars. Luna, who will not direct the firm's labor relations, will be based in Washington.

CF&I CELEBRATES 100TH BIRTHDAY

CF&I Steel Corp. on Jan. 11 observed the 100th anniversary of the incorporation of its ancestor company, Central Colorado Improvement Co. The company went through various name changes—Colorado Coal and Iron Co. (1880); Colorado Fuel and Iron Co. (1894); Colorado Fuel and Iron Corp. (1936)—before taking its present name in 1966. It was the first steelmaker in the West to manufacture wide flange beams (1962). CF&I today ranks 12th in the industry in steel shipments. Its founder, General William J. Palmer, also founded the Denver & Rio Grande Railway (later the Denver & Rio Grande Western).

the Difference

that makes Cardwell Westinghouse Draft Gears Your Best Buy

The housing is a costly component of any draft gear. The difference in this draft gear housing is durability and dollar savings • Friction plates located on inner surfaces *eliminate wear on the housing*. Long life and reuse assured • One-piece design cast in high-grade alloy steel • Heavy side walls provide unusual column strength and durability • ***Westinghouse Draft Gear users have a special bonus. Housing uniformity makes possible conversion of the Mark 50 and Mark R-500 to Mark H-60 Hydraulic-Friction Draft Gears.*** This doubles capacity. Cost is nominal. Over a quarter of a million Mark 50 and Mark R-500 gears now in service with this option!

Buy draft gears with the housing that makes the difference —Buy Cardwell Westinghouse!

CARDWELL WESTINGHOUSE COMPANY

332 SOUTH MICHIGAN AVENUE • CHICAGO, ILLINOIS 60604 U.S.A. • TELEPHONE 312—427-5051

INTERNATIONAL DIVISION SAME ADDRESS

CANADIAN CARDWELL COMPANY LTD., LACHINE 620, QUEBEC

MEMBER RPI

Circle 6 on coupon page 83

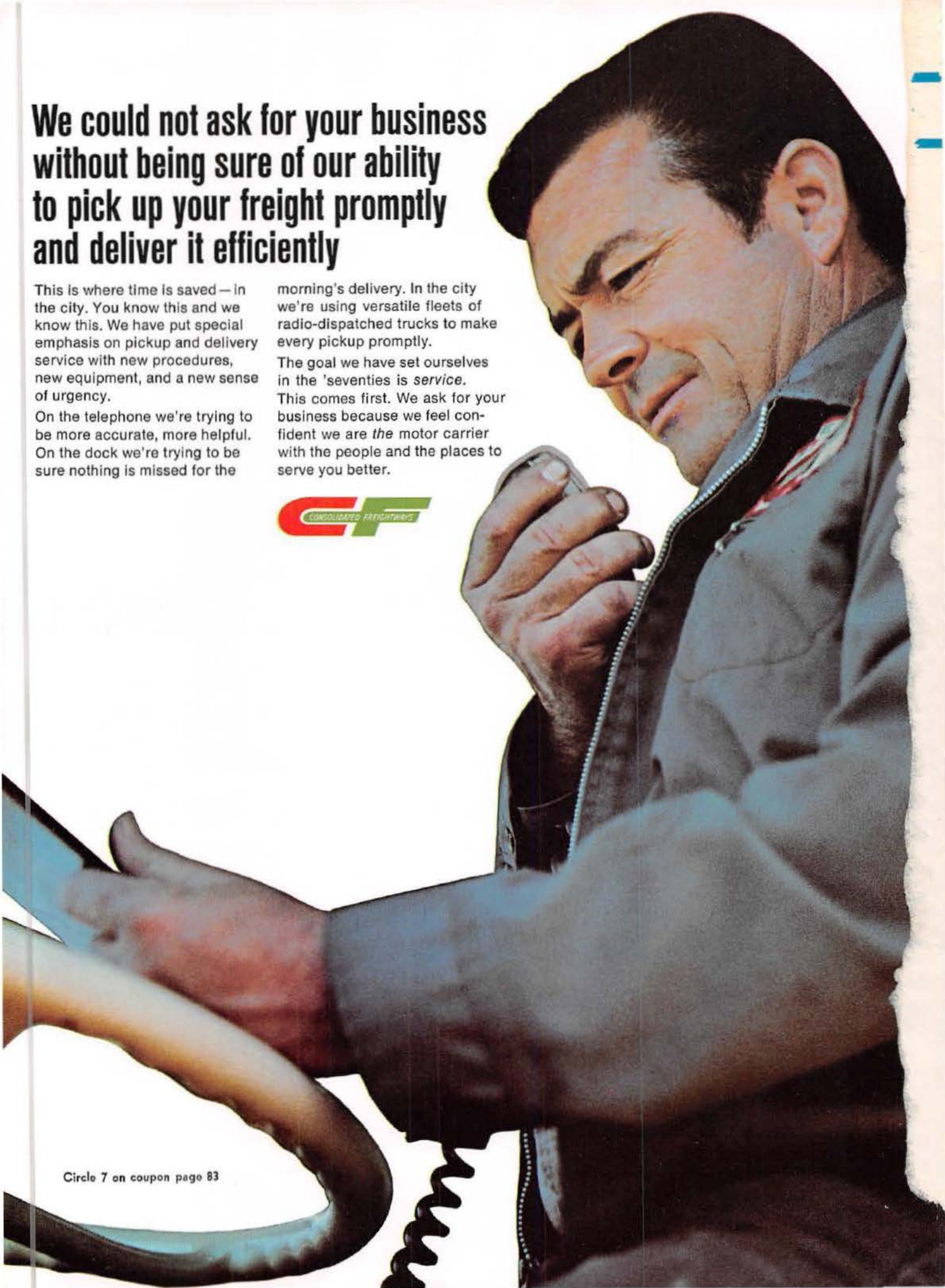
We could not ask for your business without being sure of our ability to pick up your freight promptly and deliver it efficiently

This is where time is saved—in the city. You know this and we know this. We have put special emphasis on pickup and delivery service with new procedures, new equipment, and a new sense of urgency.

On the telephone we're trying to be more accurate, more helpful. On the dock we're trying to be sure nothing is missed for the morning's delivery. In the city we're using versatile fleets of radio-dispatched trucks to make every pickup promptly.

The goal we have set ourselves in the 'seventies is *service.* This comes first. We ask for your business because we feel confident we are *the* motor carrier with the people and the places to serve you better.

CONSOLIDATED FREIGHTWAYS



Circle 7 on coupon page 83

RAILWAY AGE

NEWS

NATIONALIZATION?

"No!" say leading Presidential contenders

SENATOR EDMUND MUSKIE strongly opposes nationalization, favors S. 1731 "which would allow expansion and modernization of present equipment and avoid government operation or intervention in management decisions."

SENATOR HUBERT HUMPHREY supports "more government involvement to assist management in efficiently running" railroads. Maintenance of roadbeds, he says, would only give rails same advantage enjoyed by other modes.

SENATOR HENRY JACKSON says government ownership "would be bad for labor, business and the country as a whole." But he fears "failure" of Nixon economic plan plus "inaction" by Administration could force PC takeover.

SENATOR VANCE HARTKE finds "no need or justification or sentiment for takeover." He complains that "discussions of government's role tend to assume that it has to be all or nothing."

A Railway Age exclusive

Six candidates for the Presidency of the United States told Railway Age last week that they strongly oppose government takeover of railroads.

Four of them—Senators Edmund Muskie of Maine, Hubert Humphrey of Minnesota, Vance Hartke of Indiana, and Henry Jackson of Washington—gave this magazine their detailed views on the railroad crisis and how they would resolve it short of nationalization. The four are the leading contenders for the Democratic nomination.

Two others—former Senator Eugene McCarthy of Minnesota and U.S. Rep. Paul McCloskey of California, who is seeking to wrest the Republican nomination from President Nixon—went on record as opposing nationalization but did not elaborate in great detail.

The White House declined to comment. Herbert G. Klein, director of communications for the Executive Branch, told Railway Age that it was White House policy to discourage requests for "individualized statements" from the President. Also in the "no comment" column were Senator George McGovern (D.-S. Dak.); U.S. Rep. Shirley Chisholm (D.N.Y.); U.S. Rep. John M. Ashbrook (R.-Ohio); Gov. George Wallace of Alabama, and Mayor John V. Lindsay of New York.

But most of those who did reply gave Railway Age well-thought-out statements that indicated a deep concern over the future of railroads.

Following publication of a lead article in the Wall Street Journal Jan. 6 under the headline, "Government Chugging Toward Nationalization of America's Railroads," Railway Age posed the following question to the Presidential candidates:

"Do you feel that nationalization of the railroads is desirable and/or inevitable? Do you believe that any of the pending legislation in Congress can help to prevent nationalization? What other proposals, if any, do you have for keeping railroads under private ownership?"

Senator Muskie, widely regarded as

Attend one of our ACI SEMINARS...

We'll help you enlarge both your technical and operating knowledge of this extraordinary management tool!

We cordially invite your attendance. First class will be held Tuesday, February 29, 8:30 AM to 5:30 PM, at our South Holland headquarters. Subsequent sessions will be held on the last Tuesday of each month, through December, at South Holland.

All classes will be from 8:30 AM to 5:30 PM and each will be **a complete one-day course,** equally devoted to technical presentations and the latest practical applications for terminal control in rail, piggyback and marine operations.

All of us at ACIS feel we should contribute to the industry from an educational and training standpoint. With this goal in mind, we've designed our ACI Seminar Classes to be a vital and timely contribution to the railroad industry. They are directed toward all who are engaged in operating; signal and communication; data processing; industrial engineering; and operations research. These Seminars will be conducted at no cost to you.

Our faculty will be comprised of our highly qualified staff of research, engineering and systems people. Each class will be limited to ten participants.

Please let me have your attendance request right away and be sure to tell me which class date you prefer. We will be happy to reserve your hotel accommodations and arrange transportation to and from the airport. If possible, we'd like at least 30 days advance notice. Write to me personally –

W. H. Thompson
President

ACI Systems Corp.

Headquarters: S. Holland, Ill. 60473
520 Armory Dr. Phone 312-331-6203
Inbound Wats 800-323-7061

Atlanta, Ga. 30303
Phone: (404) 522-5006

Westwood, Mass. 02090
Phone: (617) 326-8960

Circle 8 on coupon page 83

the front-runner in the race for the Democratic nomination, said nationalization "would simply transfer ownership and operation—and all the present problems—of the rail lines to the public, and at a heavy cost to American taxpayers. It would severely limit the funds needed for new capital investment," Muskie added, "since publicly-owned railroads would have to compete for funds with other major domestic spending priorities such as education, housing and health care."

As a means of helping the railroads help themselves, Muskie endorsed a pending bill, S. 1731, which he said would help the industry to modernize its rolling-stock fleet without turning over any of its management prerogatives to the government.

Senator Humphrey suggested that the Federal government might consider "direct control of the roadbeds utilized by the railroad industry, thus treating railroads as it treats other forms of commercial transportation." Obviously remembering his close ties with labor, Humphrey took pains to say that whatever is done, present railroad employees should be protected.

Senator Hartke, who is chairman of the Senate Surface Transportation Subcommittee, elaborated on the position which he had stated several weeks ago in an interview with Railway Age (RA, Oct. 25, 1971, p. 36). While strongly opposing nationalization, he suggested that a study of takeover may help to develop acceptable alternatives.

Senator Jackson, declaring that nobody would benefit from nationalization, said he nonetheless feared that Penn Central might have to go this route, a victim of the Administration's failure to restore the national economy to health.

The full texts of the candidates' statements to Railway Age follow:

SENATOR EDMUND S. MUSKIE:

Nationalization of the American railroad industry would be highly undesirable, although that seems to be the direction in which we are tending. Nationalization is not inevitable if the American public and the transportation industry will face up to the real problems affecting the industry. Efficient and economical rail transportation service can and, I think, must be provided by the private sector responding to real market forces.

There is no question that the adequacy and efficiency of rail transportation service have diminished in the past few years and in some instances continue to worsen. But nationalization or government operation would not create the new facilities which the industry needs so badly. Rather, such action would simply transfer ownership and operation—and all the present problems—of the rail lines to the public, and at a heavy cost to American taxpayers. It would severely limit the funds needed for new capital investments, since publicly-owned railroads would have to compete for funds with other major domestic spending priorities such as education, housing and health care.

Muskie: "We must com

Just as there is not one simple explanation for the sad financial condition of many American railroad enterprises, there is no single, simple solution to their problems. It is clear, however, that much of the past government intervention in the railroad industry has served neither the interests of the public nor of the industry. Where the government has regulated and controlled the industry, it often has done so unwisely. And some matters which should have been the subject of careful government scrutiny have been ignored by the regulators. Management bears its fair share of the responsibility, too, for waking up too late in some instances to the challenges faced by the industry in a changinng world, and in a few cases, for outright mismanagement.

Our short-run actions necessarily must deal with the symptoms of the current crises, but we must also begin to come to grips with the fundamental causes of those problems as well.

I think Senator Magnuson's bill, S. 1731, which would permit the government to guarantee private loans to railroads for the purchase of rolling stock, is a good example of the way in which government resources should be used to help the private sector do those jobs which the private sector does best. This bill would allow expansion and modernization of present equipment by individual carriers which know their needs, without requiring governmental outlays of scarce public funds. It would also avoid governmental operation of the railroads or government intervention in management decisions and does not even require the establishment of a new government agency.

Over the longer term, we must begin to evolve a more realistic regulatory environment which will both promote the public interest and facilitate efficient, economical and profitable operation of the railroads.

With mutual confidence and a shared goal of efficient, first class rail service, I believe we can develop a system which leaves to government and to the rail industry those responsibilities which each performs best.

to grips with the fundamental problems"

SENATOR HUBERT H. HUMPHREY:

Full nationalization of railroads in the United States is certainly not inevitable. However, much more effective government action must be considered as a last resort to prevent crucial railroad lines from folding. The most obvious example of the possible need for government action is the case of the Penn Central. The Penn Central system is far too vital a link in our nation's commercial and passenger transportation system to allow it to close down. The burden that a Penn Central failure would place on other means of commercial and passenger transportation facilities would be intolerable. We seek to avoid such crisis situations.

The Congress is now looking into several bills which address the problem of railroad reform. I certainly favor Federal legislation which creates and preserves jobs, encourages investment, improves competition, and stimulates maintenance and growth in the railroad industry. Another proposal which might improve the situation is for the Federal government to take over direct control of the roadbeds utilized by the railroad industry, thus treating railroads as it treats other forms of commercial transportation. If the government does control and maintain the railroad beds, utilizing manpower provided from the ranks of maintenance personnel currently employed by the railroad industry, users' taxes could be employed to offset the costs. The benefits to the industry might prove great indeed, and crisis situations like the case of Penn Central might not only be remedied, but prevented in future.

Thus I do not favor nationalization as official policy, but do recommend more government involvement to assist management in efficiently running the American railroad system, a railroad system which has made such a great contribution to the growth of our nation. I should add, however, that if selective government action becomes necessary to prevent vital railroad links from disappearing, the employees of the affected companies should be entitled to full and equitable pension arrangements which would preserve their retirement income rights.

SENATOR HENRY M. JACKSON:

I am opposed to nationalization of the railroads; such a step would be bad for labor, business and the country as a whole. Unfortunately, there are a number of railroads in serious financial condition. The most glaring example is the Penn Central Transportation Company which has been in bankruptcy since June 1970. My understanding is that the Penn Central even under the protection afforded by the bankruptcy court is experiencing extreme difficulties. It is generating barely enough cash to keep the railroad above the drowning level. The failure of the Administration's economic game plan has substantially dimmed prospect for recovery under the new management. A healthy economy would have contributed significantly to revitalization of the Penn Central and other ailing railroads; if the economy does not improve substantially it appears that without additional Federal aid we will be faced with a shutdown of the Penn Central. Since Penn Central is the major carrier of freight in the northeast, a shutdown would threaten the collapse of those public services which are dependent upon the railroads. Such a failure of essential services could not be accepted and the government could be forced to step in and even run the railroad. I think we should be making plans right now for avoiding this if at all possible. The Senate Commerce Committee does have a proposal but suggestions from the Administration have been non-existent. I am fearful that the economic policies and inaction by the Administration may join together and cause the kind of result, i.e., government operation, that none of us want.

SENATOR VANCE HARTKE:

I do not feel that nationalization of the nation's railroads—and by that I mean government ownership of the raiload plant and equipment and operation of the total railroad system by government agency of one sort or another—is either desirable or inevitable under present conditions.

Despite the widely-proclaimed weakness of the railroad industry taken as a whole, there are a number of individual railroads that are doing all right. There is no need or justification, or sentiment, I believe, for substituting the government for the present ownership or management of these railroads. Thus I do not believe that nationalization of the industry is on the horizon and marching inexorably forward.

On the other hand, the dismal financial performance of some railroads; the serious deterioration of their plant, equipment, and service; the termination of most private passenger service, and the Penn Central debacle casts into question the ability of the private sector to provide all the railroad service needed by the country. Perhaps, expanded government involvement is the answer in these areas.

The problem is bad. We have not had any recent, good discussion of the proper role of the government in the railroad industry. Nationalization is only one of the alternatives. Unfortunately, the other choices have not been developed and the relative benefits and costs—both economic and social trends—determined. Discussions of the government's role tend to assume that it has to be all or nothing. They also tend to assume that nationalization is so obviously bad that it need not be considered even for the purpose of weighing alternative roles. Its merits and demerits—costs, implications for plant and equipment, for operating procedures and efficiency—are not examined except in rhetorical generalities. Government ownership and operation of a railroad may indeed be undesirable, but careful and systematic examination of alternative roles for the government in the railroad industry can only be helpful.

What always must be kept in mind is that the issue is to find the best way to assure adequate transportation for people and goods.

Fear that simple examination of an expanded role for the government is a step toward nationalization should not be allowed to block useful discussion.

I believe that the Essential Rail Services Act of 1971 (S. 2710), which I introduced in the last session of Congress, is a beginning for dealing with the rail industry problem most likely to open the door to nationalization—what to do with hopelessly bankrupt railroads. The Essential Rail Services Act would direct the Secretary of Transportation to specify the essential services provided by a bankrupt railroad and to formulate a program for the continuation of those services whenever it appears that a plan of reorganization cannot be privately reached within two years. The act would not limit the Secretary as to the nature of the program, and would thereby permit opportunity for analysis of alternatives. It sets forth as potential alternatives (1) extension of service by existing carriers, (2) acquisition and maintenance of necessary rights of way by the govern-

ment so that they could be used by a private railroad in return for the payment of a user charge, and (3) ownership and operation of the essential services by a quasi-public corporation.

The Act would direct the Secretary to formulate his program only when it appears that a traditional reorganization cannot be reached within two years or upon request of the trustees. Thus, private parties to a railroad bankruptcy who wish to arrive at a reorganization without government involvement may do so. But they may not draw out the reorganization process to intolerable lengths. If a stalemate develops between the private parties, formulation of the Secretary's program may well form a common basis for continued private negotiation.

If private parties do not reach an agreement within 18 months, the Act would authorize the Secretary to enter into negotiations with them to implement his program. If negotiation proves fruitless, at the end of six months, the Secretary would be given the power of eminent domain in order to continue essential rail services as detailed in his program. Of course, Congress will expressly retain power to modify a new program before its implementation.

I believe that it is important to recognize that the Essential Rail Services Act is designed to encourage private restructure of bankrupt railroads. The Secretary formulates a program only if it appears that private action will not provide for the continuation of essential rail services. There is a definite timetable for increasing government involvement; this provides a framework and opportunity for private agreement, at the same time assuring expeditious resolution of the bankruptcy. Direct government action comes only as a last resort and after ample time for private parties to take charge.

Another bill which I also introduced in the last session, the Surface Transportation Act of 1971 (S. 2362) is not directly related to the issue of nationalization but does offer solutions agreeable to the various regulated modes of transportation on major issues that bedevil both strong and weak railroads: financing, rate adjustments, abandonment of unprofitable lines, discriminatory state and local taxation and grade-crossing safety. Hearings have begun on the measure and also on the DOT proposals that address most of the same issues but give different answers in some cases. Confrontation of these issues and their resolution will result in reasoned action short of nationalization for improving the conditions of the rail industry and strengthening its ability to play its vital part in our economy.

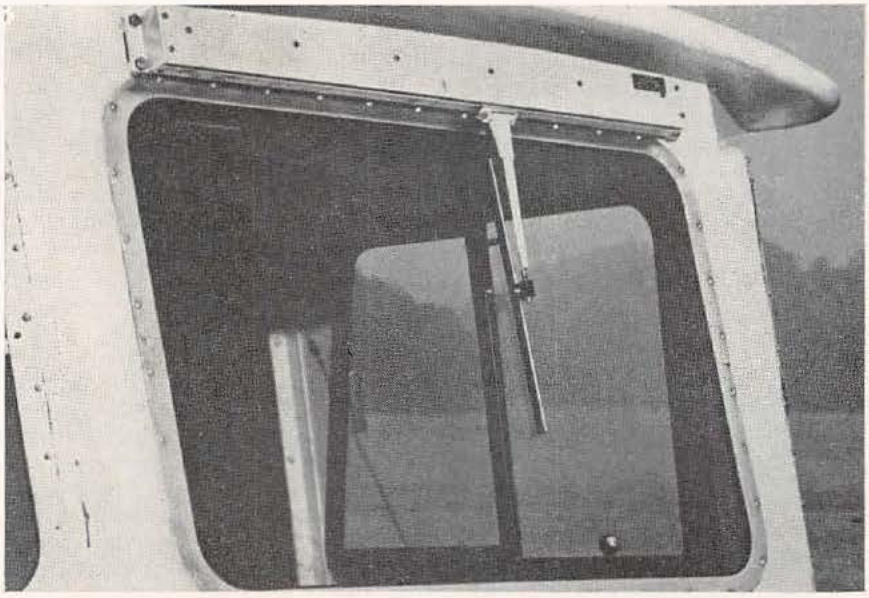
REPRESENTATIVE PAUL N. McCLOSKEY, JR.

There is no doubt that the railroads are facing serious financial problems, but I don't feel that nationalization of railroads would solve the problems nor be feasible economically.

It is my feeling that the railroad industry requires assistance, and I am currently examining several bills which have been introduced in Congress in order to determine which of the proposed measures is best designed to deal with this problem. I did favor attempts to provide tax incentives for investments in railroad equipment, but as you probably know, the bill was not reported out of the House Ways and Means Committee.

EUGENE J. McCARTHY:

Obviously I am not in favor of nationalizing railroads, but believe there must be changes in the general management of transportation in this country including private automobiles, trucks, airlines and railroads.



← *Straight — Line →* *Window Wiper*

The 'Straight-Line' Window wiper is designed for merchant vessels, commercial craft, motor transport and railway use under all weather conditions, and offers the following advantages:

• **Sweeps the whole window** — Instead of just an arc or circle, the whole window is continuously swept, giving the widest field of viewing.

• **Unrestricted vision in all weathers**— No restriction of vision in clear weather as the wiper blade is parked at the side of the window.

• **Quick and easy installation** — High labor costs are eliminated; no cutting of window required. Suitable for all type windows — fixed, hinged, sliding.

Call or write:

McNab, Incorporated

165 Spring St., New York, N.Y. 10012
(212) 966-2625

Circle 51 on coupon page 83

C&NW offers new export grain rates

Chicago & North Western is setting up a new tariff on export corn and soybeans which combines the benefits of multiple-car rates with flexibility in the selections of origin/destination. Two levels of rates are involved, each applying on five or more consecutive multiple car movements from C&NW origin points to Gulf and Great Lakes ports with an option to the East Coast.

One rate will apply on tons equivalent to fifty 4,400-cubic-foot covered hopper cars per movement, the other on tons equivalent to 25 cars. An added feature, according to C&NW, "will give the shipper the option to select different Midwest origins and/or export destinations for his five or more consecutive shipments, thus giving him a wide range of marketing possibilities."

The tariff, which will carry an effective date of about May 15, has no provision for stopping for inspection, or for transit, and it will require loading within 24 hours and unloading within 48 hours. Later domestic traffic will be involved, says C&NW. Planned are interacting rates to prime markets, processors and feeding areas.

Southern set new records in 1971

Southern Railway plans a two-for-one stock split and a higher quarterly dividend following record performance in 1971. Operating revenues of $647.4 million for 1971 were up 7.4% over the previous year; on an ICC basis net income after taxes was $72.7 million, up 30.4%. Both were at an all-time high, as was the road's capital spending of $140.5 million.

In addition to approving the common and preferred stock splits and an increase from 75 cents to 80 cents in the common dividend, Southern's board also acted to move ahead promptly with plans for acquisition of the Norfolk Southern. NS stockholders must still approve the tax-free merger with one or more Southern subsidiaries.

According to W. Graham Claytor, Jr., Southern president, NS acquisition will permit Southern to enter an area of eastern North Carolina with a promising potential for industrial growth. It is not expected that the merger could be effected before at least 1973.

Southern expects that its revenues will be higher this year. Among the traffic growth areas are expected to be the paper industry, fertilizers, coal and piggyback. Originally $141.6 million had been budgeted for capital expenditures this year. In 1971, however, it was found that freight cars and locomotives could be acquired at substantial savings so equipment valued at $23.2 million was ordered to take advantage of the favorable prices. This raised 1971 capital expenditures from the original $117.3 million to $140.5 million since the cars and locomotives were all delivered by year's end. The result is an apparent drop to $121.8 million capital spending for 1972, although the total of $262.3 million for two years remains unchanged.

Part of the gain in net income in 1971 resulted from a reduction in taxes because of the effect of the investment tax credit amounting to $6.5 million. However, Southern's income before Federal income taxes rose by 22.4% to $92.4 million in 1971.

Southern stepped up expenditures on maintenance of way and equipment in 1971. It was noted that the combination of sustained income and good weather led to accomplishment of a substantial amount of m/w work in the fourth quarter. Claytor is confident that Southern's 71.6% operating ratio for 1971 is among the lowest of the large railroads. He noted that since the operating crafts have not yet ratified the 1971 contract, new work rules are not yet in effect and higher wage rates are not being paid.

Lines on Labor

GUS WELTY

FROM NEGATIVE TO POSITIVE?

One of the great unanswered questions about the future of management/labor relations—on the railroads and in all industry—concerns the degree to which the employee and his representatives will be participating in the decision-making process. Over the years, unions have enjoyed a certain amount of success in gaining influence over management decisions. Most of this, however, has come through the traditional "bargaining" process and its effect has been essentially negative. From the signs you can read today, the influence of the employee and his organization will continue to grow—only in the new movement, the effect may be more positive.

LABOR "INTRUSION": NOW IT BENEFITS NO ONE

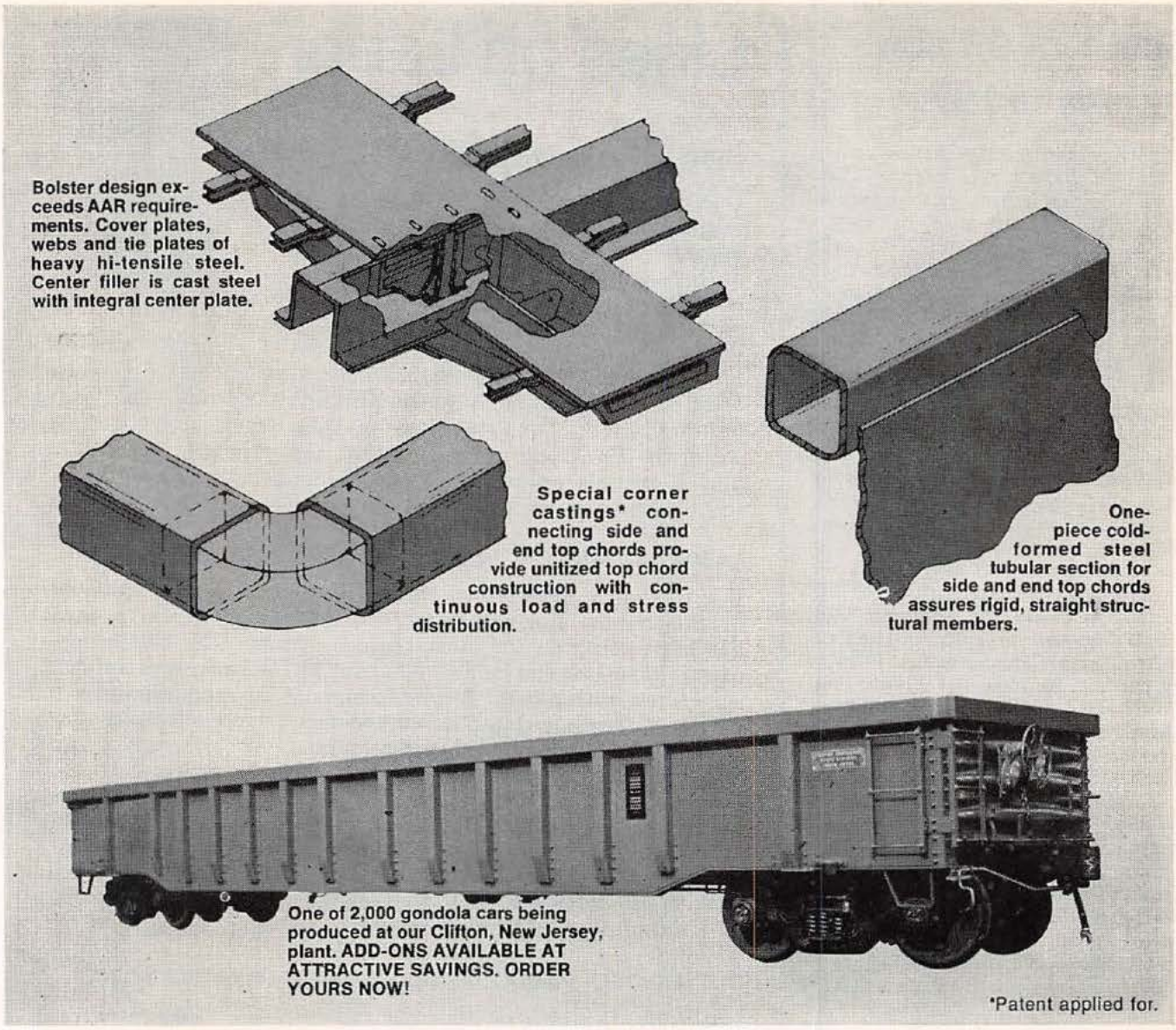
For a variety of reasons, railroads provide a good example of the trends. Bargaining with organized employee groups has been going on for more than a century. The beginnings of rail labor law can be pegged about as far back. Rail unions, sometimes with a hand from government and sometimes with an assist from shortsighted management, have effectively intruded into managerial decision-making. And, though many of these "intrusions" were valid attempts to correct abuses, the total result has been negative—negative to management and negative to labor. Many factors have worked together to create "the railroad problem." But there has to be a correlation between (1) the flat performance of the industry for the past two decades, and (2) the fact that railroad employment is less than half of what it was 20 years ago.

BUT LABOR'S PARTICIPATION CAN BE A POSITIVE FORCE

Naturally, the idea of allowing the employee and his representatives even greater influence is abhorrent to many managers—perhaps nowhere more so than in the railroad industry. But the trend is developing, in a broad-based way. And the better part of wisdom may be not to dig in and fight it but rather to try to channel employee participation along constructive, mutually beneficial lines.

All this, of course, assumes that employees as well as managers are ready and prepared to act jointly and responsibly. Such may not be the case. In the railroad industry, for instance, management and labor have a long history of saying "No" to each other. In the railroad industry, too, there is serious question as to whether employees and their representatives are aware enough of the commercial side of the business to develop valid opinions.

In the past, management seemed to make no great effort to tie commercial reasoning to management/labor innovation. Perhaps it was assumed the unions would say "No." Perhaps it was assumed the price of a "Yes" would be too high. Today, this old philosophy is changing. It's a slow process, and a painful one. Often, one step forward seems to be followed by two steps in the opposite direction. Anybody who revels in decisiveness gets frustrated, because indecision is frequently the order of the day. Despite all this, dialog continues—and there are signs that the message is getting across. Maybe the "new breed" can pull it off: The new breed in rail management—and in union management.


Bolster design exceeds AAR requirements. Cover plates, webs and tie plates of heavy hi-tensile steel. Center filler is cast steel with integral center plate.
Special corner castings* connecting side and end top chords provide unitized top chord construction with continuous load and stress distribution.
One-piece cold-formed steel tubular section for side and end top chords assures rigid, straight structural members.
One of 2,000 gondola cars being produced at our Clifton, New Jersey, plant. ADD-ONS AVAILABLE AT ATTRACTIVE SAVINGS. ORDER YOURS NOW!
*Patent applied for.

For a limited time we're offering you an unlimited number of gondolas at a 2000-car add-on price.

We're building 1,500 100-ton 52′ 6″ and 500 70-ton 65′ 6″ fixed end steel floor gondola cars.

For a limited time—until June 30—for an unlimited number of customers, we can provide an unlimited number of these cars at a really attractive add-on price.

Visit us at our Clifton, New Jersey, plant and see these top-quality cars coming off the line. While you're here we'll work up any options you may want, discuss financing arrangements and set delivery dates.

Meanwhile, to learn how economically you can get any number of these fine cars into your fleet, earning money for you, contact Fruehauf Railcar Division, Fruehauf Corporation, 660 Van Houten Avenue, Clifton, New Jersey. Telephone (201) 779-1976.

TOTAL TRANSPORTATION

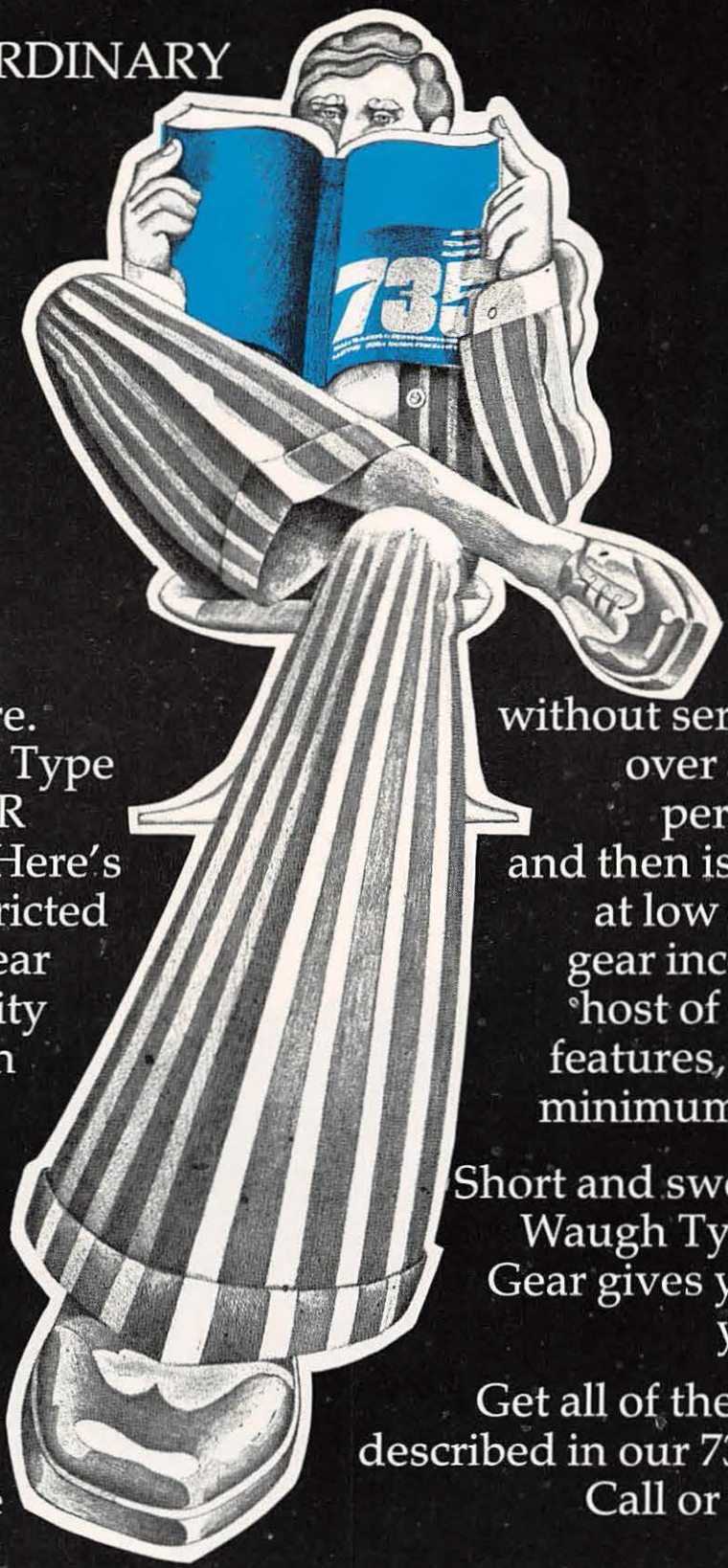
MEMBER RPI RAILWAY PROGRESS INSTITUTE

Fruehauf RailCar

A DIVISION OF FRUEHAUF CORPORATION

Circle 9 on coupon page 83

EXTRAORDINARY



The great one is here. It's the new Waugh Type 735 Draft Gear (AAR Certificate No. 53). Here's a gear that's unrestricted in its use. A draft gear that has high capacity and absorption with low reaction—provides 40% more official cushioning capacity than minimum AAR M-901-E specifications. A draft gear that's designed to operate without service failures over an extended period of years, and then is reclaimable at low cost. A draft gear incorporating a host of outstanding features, yet requires minimum initial cost.

Short and sweet: the new Waugh Type 735 Draft Gear gives you more for your money.

Get all of the specifics as described in our 735 brochure. Call or write today.

if it rolls on rails specify

WAUGH

DRESSER

MEMBER RPI RAILWAY PROGRESS INSTITUTE

DRESSER TRANSPORTATION EQUIPMENT DIVISION

DRESSER INDUSTRIES, INC.

Home Office & Plant: 2 Main Street, Depew, New York 14043 • (716) 683-6000

Main Sales Office: 332 S. Michigan Ave., Chicago, Ill. 60604 • (312) 939-1280

Field Sales Offices: Atlanta • Baltimore • Philadelphia • St. Louis • San Francisco

The finest caboose you can buy. At any price.

No matter what your budget limitations are, you can have an International caboose. Because each International caboose is tailor-made to include as much or as little as your situation requires. And each car is built with the same care, quality components and modern low-maintenance engineering that made International the leading name in the industry.

OUR BEST CABOOSE IS THE ONE WE BUILD FOR YOU.

INTERNATIONAL CAR CO

P.O. Box 222, Bales Road, Kenton, Ohio 43326
Phone: 419/673-1251

A part of Nationwide Industries, Inc.

Representatives:

M. H. Frank Co., Cleveland, Ohio
The Prest Co., St. Paul, Minnesota
R. B. Hornberger Co., San Francisco, California
General Standard Co., Chicago, Illinois
Frank E. Ross Co., St. Louis, Missouri

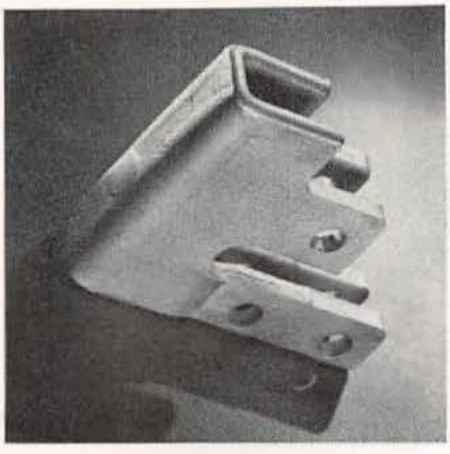
MEMBER RPI

Circle 11 on coupon page 83

Circle 12 on coupon page 83 →

BECAUSE ALL WE THINK IS WHEELS, ALL YOU NEED TO THINK IS GRIFFIN®
When you come to Griffin for wheels, you're on the main line. Because we're all wheel specialists. From our president to the men in the plants and the shipping departments. Including a trouble-shooting team that gets the facts on every service problem involving wheels. (We learned years ago that wheels often get blamed when other equipment fails, but we never quit checking.)
So, when you need railroad car wheels, check your needs with Griffin. Because we know wheels. We have what it takes to build 'em better. And we don't get side-tracked on other things.
GRIFFIN WHEEL COMPANY
445 N. SACRAMENTO BOULEVARD • CHICAGO, ILLINOIS 60612
ONE OF THE Amsted INDUSTRIES
GRIFFIN
the wheel people.
RPI

Let's get down to facts



Buffalo Brake Beams feature

*** special wear plates**

Wear plates on ends of beam for longer life and lower friction with side frame wear plates.

Who else does it?

Buffalo Brake Beam Company

Manufacturers of: Brake Beams, Wear Plates, Master Keys
Buffalo, N.Y. 14218 • Lackawanna, N.Y. 14218 • Hamilton, Ontario

MEMBER RPI

Circle 15 on coupon page 83

EXTRAORDINARY

The great one is here. It's the new Waugh Type 735 Draft Gear (AAR Certificate No. 53). Here's a gear that's unrestricted in its use. A draft gear that has high capacity and absorption with low reaction—provides 40% more official cushioning capacity than minimum AAR M-901-E specifications. A draft gear that's designed to operate without service failures over an extended period of years, and then is reclaimable at low cost. A draft gear incorporating a host of outstanding features, yet requires minimum initial cost.

Short and sweet: the new Waugh Type 735 Draft Gear gives you more for your money.

Get all of the specifics as described in our 735 brochure. Call or write today.

if it rolls on rails specify

WAUGH

DRESSER

DRESSER TRANSPORTATION EQUIPMENT DIVISION

DRESSER INDUSTRIES, INC.

Home Office & Plant: 2 Main Street, Depew, New York 14043 • (716) 683-6000

Main Sales Office: 332 S. Michigan Ave., Chicago, Ill. 60604 • (312) 939-1280

Field Sales Offices: Atlanta • Baltimore • Philadelphia • St. Louis • San Francisco

MEMBER RPI RAILWAY PROGRESS INSTITUTE

The finest caboose you can buy. At any price.

No matter what your budget limitations are, you can have an International caboose. Because each International caboose is tailor-made to include as much or as little as your situation requires. And each car is built with the same care, quality components and modern low-maintenance engineering that made International the leading name in the industry.

OUR BEST CABOOSE IS THE ONE WE BUILD FOR YOU.

INTERNATIONAL CAR CO

P.O. Box 222, Bales Road, Kenton, Ohio 43326
Phone: 419/673-1251

A part of Nationwide Industries, Inc.

Representatives:

M. H. Frank Co., Cleveland, Ohio
The Prest Co., St. Paul, Minnesota
R. B. Hornberger Co., San Francisco, California
General Standard Co., Chicago, Illinois
Frank E. Ross Co., St. Louis, Missouri

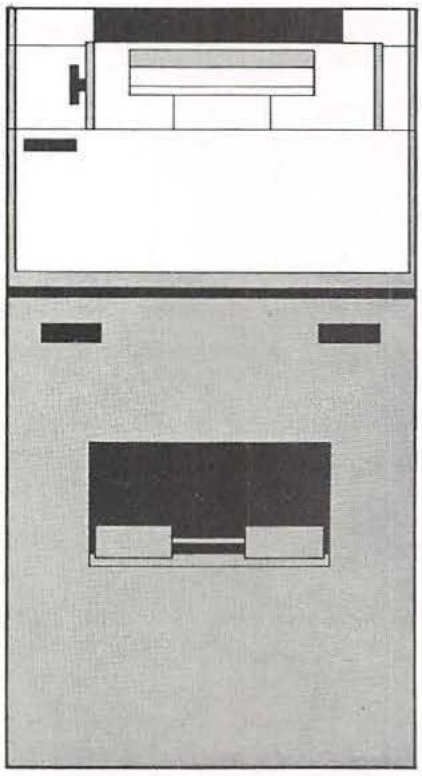
MEMBER RPI

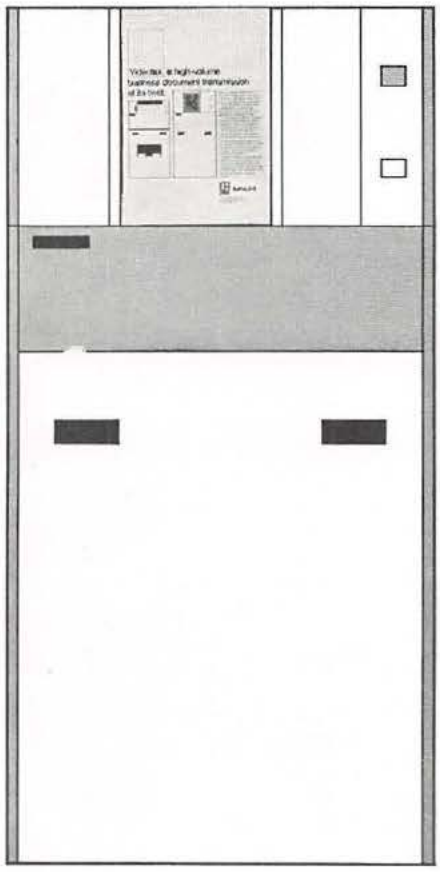
Circle 11 on coupon page 83

Circle 12 on coupon page 83 →

BECAUSE ALL WE THINK IS WHEELS, ALL YOU NEED TO THINK IS GRIFFIN®
When you come to Griffin for wheels, you're on the main line. Because we're all wheel specialists. From our president to the men in the plants and the shipping departments. Including a trouble-shooting team that gets the facts on every service problem involving wheels. (We learned years ago that wheels often get blamed when other equipment fails, but we never quit checking.)
So, when you need railroad car wheels, check your needs with Griffin. Because we know wheels. We have what it takes to build 'em better. And we don't get side-tracked on other things.
GRIFFIN WHEEL COMPANY
445 N. SACRAMENTO BOULEVARD • CHICAGO, ILLINOIS 60612
ONE OF THE Amsted INDUSTRIES
GRIFFIN
the wheel people.

Videofax is high-volume business document transmission at its best.





Datalog's Videofax transmits copy crosstown or cross country. *All* kinds of copy: letters, drawings, sketches, charts, and the like. A unique fiber optics line-to-circle converter transmits copy, and an electrographic recording process produces the sharpest, clearest copy generated by any facsimile system.

In most instances, an 8-1/2 x 11 sheet is transmitted in 17 seconds. For material requiring an unusually high degree of resolution, there is a 34-second setting.

Besides producing the best copy, Videofax is a "best buy." An automatic document loader permits the sequential transmission of a stack of papers without an operator in attendance. That means low operating costs. And Videofax costs less to lease... up to 30 percent less than comparable equipment!

Whether you have your own microwave system or use dedicated telephone lines for document transmission, take a close look at Videofax. It's the most economical system for high-volume transmission of all business documents... anywhere, anytime.

Litton DATALOG

1770 Walt Whitman Road
Melville, New York 11746
(516) 694-8300

Circle 13 on coupon page 83

Transco. Our main concern is keeping you going. Quickly. Profitably. Safely.

For over 35 years, Transco has been serving America's Railroads with their very basic needs: repair of heavily damaged cars; modification of existing cars; manufacture and maintenance of material handling racks; all types and brands of new and reconditioned crossbar systems and an infinite variety of other custom services.

Our new side-screening for Bi-Level and Tri-Level cars, currently being applied at our Cleveland facility, has received enthusiastic acceptance by automotive manufacturers. Our exclusive SL crossbar load restraining system has likewise been praised for its flexibility and durability in preventing shippers' claims.

But as varied as our products and services are, one element is always constant—efficiency!

We're in the business of keeping you going. That means less down-time on every service we provide. Remember, we're all in this together.

TRANSCO INC.

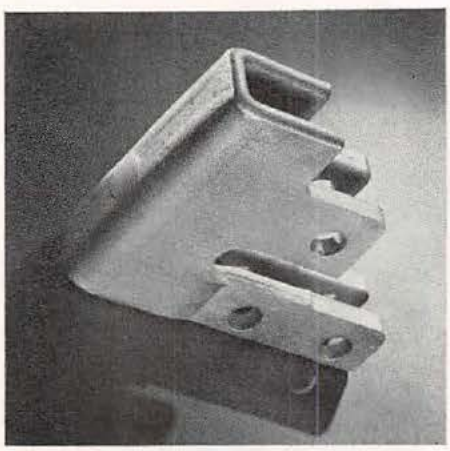
A Very Going Concern
Eighty East Jackson Boulevard
Chicago, Illinois 60604
(312) 427-2818

Chicago, Illinois
Harvey, Illinois
Macon, Georgia
Oelwin, Iowa
Buffalo, New York
Cleveland, Ohio

Transco. A Very Going Concern.

Circle 14 on coupon page 83

Let's get down to facts



Buffalo Brake Beams feature

*** special wear plates**

Wear plates on ends of beam for longer life and lower friction with side frame wear plates.

Who else does it?

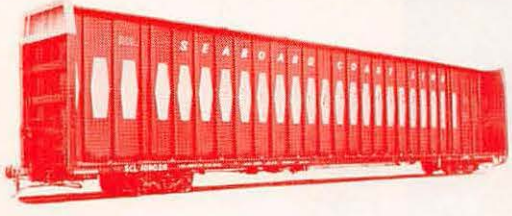
Buffalo Brake Beam Company

Manufacturers of: Brake Beams, Wear Plates, Master Keys
Buffalo, N.Y. 14218 • Lackawanna, N.Y. 14218 • Hamilton, Ontario

MEMBER RPI

Circle 15 on coupon page 83

THRALL CAR DELIVERS MORE FOR THE MONEY

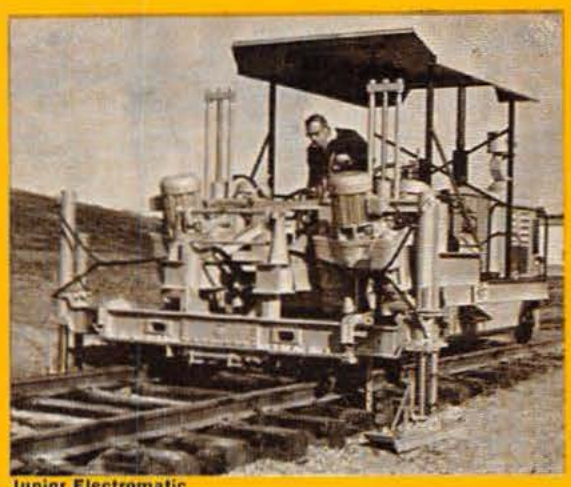


Design • Manufacturing • Leasing

THRALL CAR

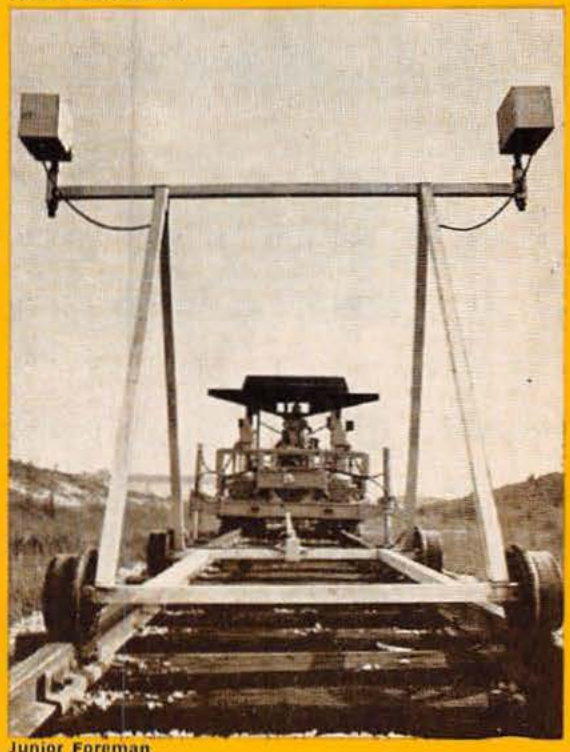
CHICAGO HEIGHTS, ILLINOIS 60411 / PHONE (312) 757-5900

Circle 16 on coupon page 83



Junior Electromatic

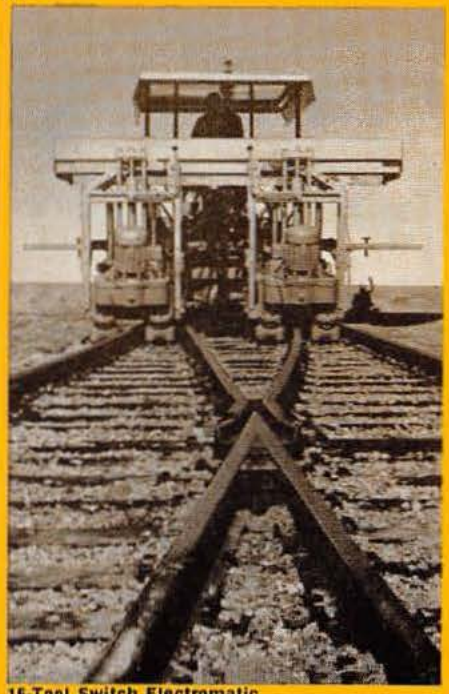
Heavy-Duty Brush Cutter



Junior Foreman

Ballast Equalizer

Autojack Electromatic Autoliner



16-Tool Switch Electromatic

The world's most advanced track maintenance equipment.

From Tamper.

Tamper designs and manufactures a complete line of railway track maintenance equipment. It's all backed by specialized after-sales service. And it's all designed for automatic, simple operation. For instance:

Autojack Electromatic Autoliner

It requires only one man to lift, level, line and tamp 1350 feet of track an hour under normal working conditions. This powerful, high speed, heavy-duty, completely automatic precision tamper maintains most of North America's main-line track. Precise control or lift on both rails using infrared beams for leveling (Delta System). Automatic cross leveling within 1/16". Lining takes place simultaneously and automatically with leveling and tamping. Automatic, continuous operation for tangent, transition and curve track. Needs no plotting of transitions or curves, because machine computes as it runs for best transition. Automatic cycle assures uniform results. Simple and inexpensive maintenance. Skin lifts to 6-inch lifts made with equal efficiency.

16-Tool Switch Electromatic

It tamps the complete switch, turnout, crossover or ladder track with production tamper speed and pattern, with only one operator. Workheads designed to move laterally, independently or simultaneously. Doubles as a production tamper—for smoothing and spotting—and as the second machine in a tandem operation. Can be equipped with optional jacks, cross level indicator, remote control, Junior Foreman and swivel deck frame.

Junior Foreman

The most recent attachment to the Junior or Switch Electromatic Tampers incorporates an infrared light beam referencing system for surfacing and lining. With the Junior Foreman, these machines become one-man operations for surfacing out of face, for smoothing and spotting and joint peaking. Inexpensive and economical operation, simple machine maintenance, highest accuracy.

Junior Electromatic

The Junior is a heavy-duty, 16-tool, compact, precision utility tamper with power to do the job. Handles the toughest jobs of spot surfacing and between cycle maintenance. Designed for work behind tie gangs, on branch lines, out-of-face work on secondary lines and as an economical second machine in a tandem tamping program. Can be equipped with optional jacks, cross level indicator, sighting, remote control and Junior Foreman.

Heavy-Duty Brush Cutter

The Kal-Trac features on-off track design with hydraulically operated On-Rail wheels. Heavy-duty cutter clears right-of-way growth up to 12" diameter trees. Cutters operate simultaneously or one side at a time, each making a 7-foot wide cut in either direction. Clears a swath 50 feet wide (25 feet from center line of track). Tamper Brush Cutters are available in various configurations and are suitable for mounting on many types of equipment.

Ballast Equalizer

The Model BE-17 features split plow and track sweeper. The large capacity side dressing attachment dresses shoulder material in either direction and incorporates tie end plow, rooter and scarifying teeth. Front directional plow can plow material out of or into the track area or transfer from one side of the track to the other. GM Diesel powered, four-wheel enclosed drive, power shift torqmatic transmission with inching control in all ranges. Rotary snow auger available.

There's much more of the Tamper line. And our equipment is now available for surfacing and lining contracts. Complete information is available on request.

Tamper INC.

Head Office & Plant—2401 Edmund Rd., West Columbia, S. C. 29169 • 803/794-9160

Plant—160 St. Joseph Blvd., Lachine (Montreal), Que., Canada • 514/637-5531

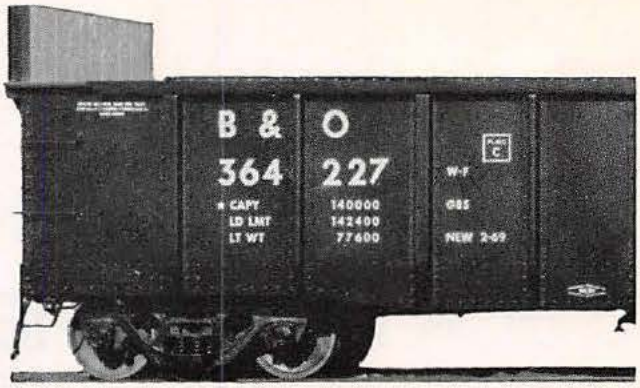
Parts Depot—1902 University Ave., St. Paul, Minn. 55104 • 612/645-5055

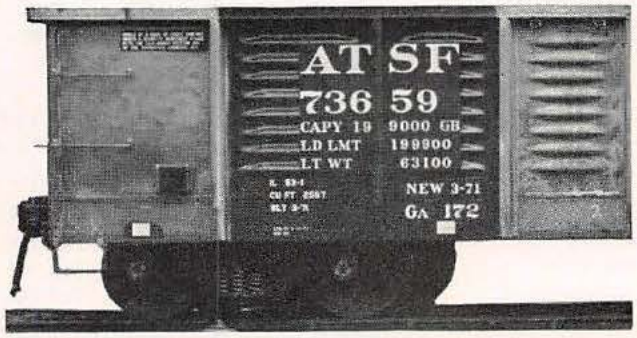
Plant, Sales & Service—Tamper (Australia) Pty. Ltd., 18 Earl St., Airport West, Melbourne, Victoria 3042 Australia • 379/8441

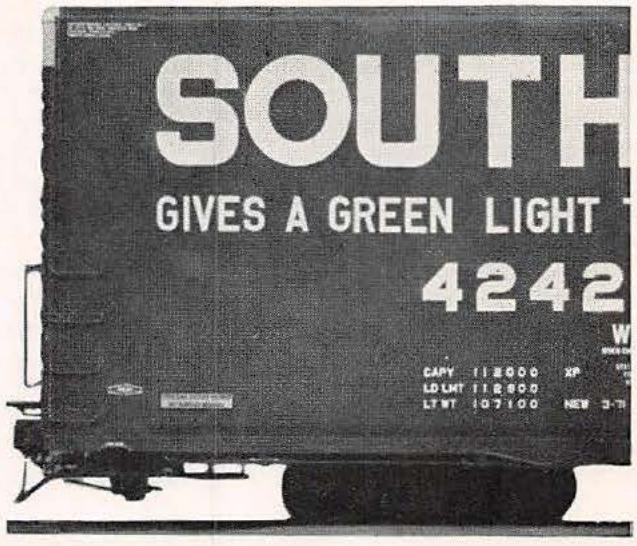
MEMBER RPI

Circle 17 on coupon page 83

Right now you have half the freight cars you will need in the future







In the next generation we will be faced with doubling every facility in America to make room for a population that will be twice as big as the one we have now.

This means new ways must be found to move high-volume cargo rapidly, safely and economically within our cities and from one city to another. Solutions to these problems can come only from experienced freight car builders who have the knowledge, capabilities and advanced ideas to produce shipper-tailored freight cars.

All of these factors are at work today at Greenville as we work with you to increase traffic by replacing, updating and modifying your existing fleet of cars.

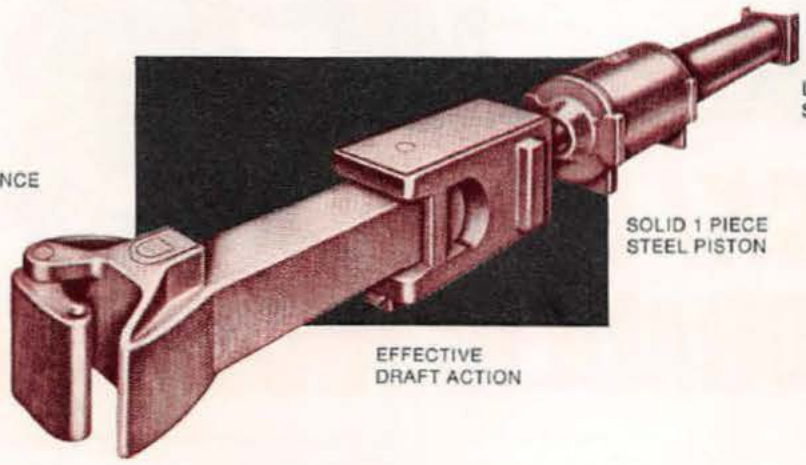
Greenville sees our country's freight transportation problems as a major challenge — and as an opportunity to utilize the company's unique capabilities to become a major part of a new high-growth industry. Call us; you'll see.

GREENVILLE
STEEL CAR COMPANY
SUBSIDIARY OF PITTSBURGH FORGINGS COMPANY
GREENVILLE, PENNSYLVANIA 16125
PHONE: 412-588-7000

Circle 4 on coupon page 83

KEYSTONE RELIABILITY...

What else would you expect from good Railroad Men?



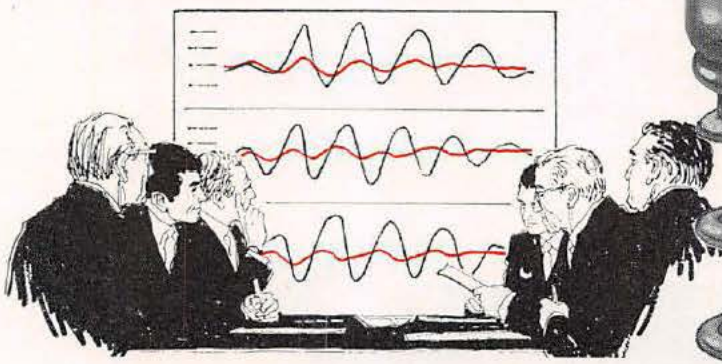
No design failures and few manpower failures out of over 60,000 Keystone SHOCK CONTROL Units in service should be convincing proof our *railroad* experience can prove a real saving and bonus for you.

Call Jim Smith at 717—761-3690 and we'll show you facts and prices that will convince you it's your best and most reliable buy.

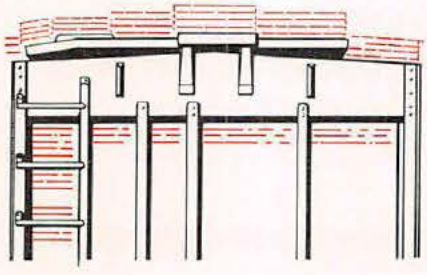
KEYSTONE RAILWAY EQUIPMENT COMPANY
Simpson Ferry Road
Camp Hill, Pennsylvania 17011

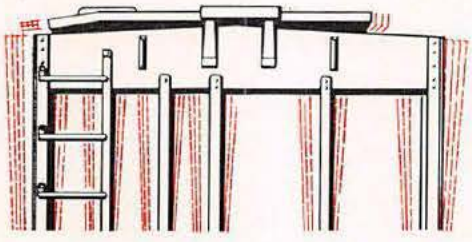
Circle 19 on coupon page 83

Backed by the most exhaustive engineering effort applied to freight car ride control



STUCKI HS-6 HYDRAULIC RIDE STABILIZER





Stucki engineering has established a new measure of predictability for freight car ride characteristics under all load and roadbed conditions. Out of our exhaustive research, initially, came the highly-successful Stucki HS-3 Hydraulic Snubber.

Now our second-generation HS-6 Hydraulic Ride Stabilizer offers even greater flexibility in installation and use on *all* existing and new 50, 70 and 100 ton freight cars. It provides greater protection than any other device.

HIGH-SPEED VERTICAL REACTIONS

Vertical shocks generated at speeds over 45 miles per hour cause damage to truck and car body structures, as well as to track and to many classes of lading. Stucki HS-6 Ride Stabilizers effectively minimize vertical response by greatly reducing centerplate reactions and preventing spring group bottoming. The HS-6 provides a softer ride for both empty and loaded cars.

LOW-SPEED LATERAL INSTABILITY

The Stucki HS-6 Hydraulic Ride Stabilizer controls hazardous rocking at low, resonant speeds. The car body roll angle is materially reduced; wheel lift and centerplate separation are both controlled. These favorable performance characteristics hold for all types of high capacity freight cars. In addition the HS-6 Ride Stabilizer is designed for long service life and minimal maintenance.

We welcome the opportunity to assist you with your truck suspension problems. Write for information.

A. STUCKI COMPANY

OLIVER BUILDING, PITTSBURGH, PENNSYLVANIA 15222 ☐ 412-281-1570

Circle 20 on coupon page 83

1972 OUTLOOK

Does this look like an industry headed for nationalization?

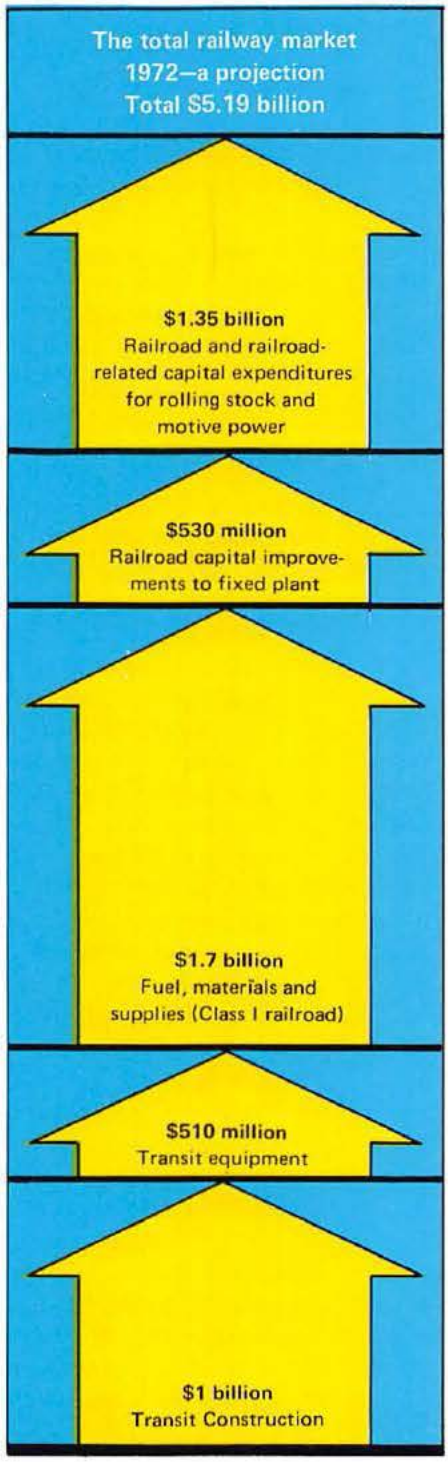
An industry that has grown used to problems may have some adjusting to do in 1972—because the time for solutions is at hand.

At first glance, that may seem to be a pretty naive observation. The problems are immense, or they are assumed to be. Many groups of people, with conflicting interests, will be involved in the search for solutions. A number of presumably-thoughtful people are saying the word "nationalization," and they are not smiling when they say it. Finally, 1972 is a Presidential election year, and editorial writers are gloomily forecasting a year in which Congress will tie itself in knots and then unravel all across the country in search of votes.

There is a certain validity to all those minus-points. But there are offsetting plus-points that seem to escape the attention of that portion of the press whose guideline seems to be, "Never let the facts stand in the way of a good scare headline."

Where do you find the grounds for optimism? Not in any passionate defense of railroading, but rather in a cool objectivity:

—Despite their troubles, railroads are still the prime mover of commerce. This is an industry that moved more than 25 million carloads of freight last year, and that effort translates into about 738 billion ton-miles. Total railroad operating revenues were well over $12.6 billion. They will top $13 billion in 1972.



—This is an industry that in 1972 will pour billions of dollars into the industrial market place. In a joint survey made public Jan. 13, the U.S. Department of Commerce and the Securities and Exchange Commission estimated that spending for new railroad equipment and plant will total $1.88 billion this year, 12.4% more than Commerce/SEC estimate was actually spent in 1971. (This figure includes Class I railroad capital expenditures, based on forecasts furnished by railroads late in 1971, plus the value of leased and private-carline equipment.) High on the shopping list will be more than 70,000 new freight cars, and more than 1100 locomotives. On top of this, railroads will spend more than $1.7 billion on operating supplies. When the rail-commuter and rail-transit and capital programs are included, it all adds up to a $5-billion market.

—For the job that has to be done, leadership has never been better. In the relatively short time he has been on the job, AAR President Stephen Ailes has won high praise from inside and outside the industry. And, though much of the railroad world still has its doubts about DOT and the Federal Railroad Administration, FRA shows signs of coming into its own, with an aggressive and articulate John Ingram at the controls.

—Election-year bickering notwithstanding, there is solid reason to believe that Congress will accomplish

Talk of takeover has this plus: It could hasten the day of reckoning in Washington

important work on legislation affecting transportation. Bi-partisan support is shaping up, as the need for action becomes more and more clear. Both DOT and major surface carriers (railroads, motor carriers and waterways operators) have comprehensive legislative packages before Congress. There would be a serious problem if DOT/FRA and the carriers each held out, adamantly, for full approval of their own proposals. What is needed is a recognition of the fact that getting legislation passed is a matter of hard work and compromise. It must also be recognized that it takes time—many months—to conduct the hearings and compile the record that is prerequisite to any major, meaningful legislation. That work is now being done. The main question is one of timing.

—In the area of greatest railroad expense, labor, the signs are more encouraging than they have been for a long, long time. In 1971, the railroad industry committed itself to a biggest-ever wage settlement. But for a change, the railroad industry got something in return. Actually, "something" is two things: (1) A span of time during which cost changes will be predictable and management/union strife will be minimal; and (2) the machinery for working on change in operating-craft work rules in, hopefully, a tensionless atmosphere.

—Internal improvements may come slowly, but they are coming. Industry critics are fond of putting down technological development in the railroad business, saying, for instance, that there is nothing on the horizon comparable in impact to the development of the diesel-electric locomotive. What they lose sight of is the fact that present railroad technology is far advanced, and that railroads are taking advantage of it as fast as they financially can. To be sure, technological refinements and improvements are needed. But the basic technology is sound.

—Railroads are getting a better fix on just what their business is all about. On the philosophical side, there is growing recognition that the basic business is service, and that profit is an outgrowth of good service. On the practical side, there is greater effort going into cost determination, and this comes not a moment too soon.

—Finally, even the talk of nationalization may prove beneficial. In times recently past, nationalization was a kind of ritual club waved about mostly by labor leaders. Then, in 1970, came Penn Central. When the full extent of the PC disaster became known, it was only natural that government-takeover should get more serious attention. Other railroad bankruptcies in the highly-visible, politically-oriented East made the problem only worse. There was even a proposal in Congress, not for nationalization as such but for a post-bankruptcy arsenal-of-weapons which included takeover as one option. All talk of nationalization, however, seemed to overlook a few basic points: (1) The cost would be astronomical, in terms of initial purchase and upkeep; (2) despite their problems, railroads in the United States do a far bigger job at less over-all cost than nationalized railroads anywhere in the world; and (3) in terms of both cost and service potential, a far more sensible alternative to nationalization would be legislative action to help railroads to correct what is wrong and to provide incentive to do what is right.

There are those who argue that there are really only two major aspects to the "railroad problem." One is that railroads carry too much traffic on which they make no money. The second is that railroads are forced to maintain too much plant over which too little profitable traffic moves. Alone, railroads can make only a slow approach to solution. Working together, railroads and government could get the job done rather quickly—with resulting benefits to (1) the railroads themselves, with improved service capability and a better revenue/expense picture; (2) shippers, who would enjoy that better service without, quite probably, much added cost; and (3) government, which could then quit worrying about getting into the business of running railroads.

Thus far, there is no real indication as to how legislative matters will go in 1972. The events of 1971 hardly offer a valid guide. As '71 began, the railroads were vigorously promoting ASTRO, in all its aspects. Then came the celebrated joining of hands by railroads, truckers and water carriers to support what became known as the Surface Transportation Act of 1971. Finally, after long delay, there was the DOT legislative program—which many people doubted had more than lukewarm Administration support.

On a number of points, STA and the DOT program are not far apart, in intent if not in precise language. There are also significant differences. And perhaps it is not an overstatement to say that the industry's future may depend, in good part, on how well differences can be compromised and a solid package put through Congress.

For their part, railroads are heading into '72 with a very real problem of

approach. It has to be solved.

The roots of this problem, of course, are buried in 1970—with Penn Central bankruptcy and the introduction of ASTRO. In late '70 and early last year, the industry campaigned with never-before-seen unity for ASTRO. All across the country, railroad spokesmen told the ASTRO story. Then came the rail/highway/-water detente, and a shifting of gears in the effort to get the legislative story across. Now, the DOT/FRA program has to be taken into consideration. Make no mistake: DOT/FRA people are serious about getting legislation through.

PC, meanwhile, continues to be the industry's albatross. PC itself is making progress, improving service, cutting its deficit. But the continuing investigations of what went on in pre-bankruptcy days—investigations which have now resulted in criminal indictments—almost guarantee a bad press for PC in 1972. And like it or not, crippled-giant PC in all too many quarters is thought of as "the industry."

The plus-point here is that the Penn Central crisis could do as much as anything else to hasten the day of reckoning in Washington—a day that seems certain to be one of hopeful omen for railroads (unless Congress opts for the nationalization route; and that avenue is so barricaded with economic and political risks that no one in Washington even wants to discuss it except as an outside, when-all-else-has-been-tried, "conceivability").

Important as they are, the external factors—legislative actions—are only a part of the story of what is going to happen in 1972. In that area of their destiny that they can control, railroads will stay busy—with projected increases in capital spending for improvements and with no let-up in the search for better methods of managing operations.

The 1971 reinstatement of the investment tax credit will be one spur to increases in capital programs. But the basic spur will be need—need for more freight cars, more motive power, better track, improved traffic-control equipment.

Financially, '72 remains in doubt. Rate increases of the past several years have produced a steady rise in revenues. A 2.5% surcharge on freight-service charges is scheduled to go into effect early in February. But, with two-step 1972 wage increases now set for most railroad employees, further increases will be needed. The amount and the application are still being debated—and now, on any proposal, there is not only ICC but also Price Commission action to be taken into consideration.

If the experts are to be believed, 1972 will be a growth year for the economy generally, in real terms. There are, as usual, as many estimates as there are experts. But consensus indicates that economic growth could go as high as 10%, less inflationary effects. Housing and new-automobile markets look especially strong. And somewhere in all this, there has to be a potentially-expanding market for rail service (one which may have been unintentionally signaled in the headline on The New York Times national economic survey for 1972, which read "Economy on an Express Track").

That bigger market is not there for the asking—but it is probably there for the doing. This means increased attention to service reliability. It means reduced transit time. It means a reduction in appallingly-high damage claims. It means rates that are fair to both the buyer and the seller. It means equipment available and in good condition for loading. It means motive power to move the equipment. It means improved terminal procedures, so that an hour gained on the road means something and is not negated by several hours lost in the yard. It means realization on the employee's part that his job depends on how well the customer is taken care of. It means implementation of agreed-to work-rule changes which can lead to faster and more reliable service. It means not a take-over by the government but a resolve to give transportation, railroads primarily included, a fair shake.

A year ago, this was the conclusion of Railway Age's "Outlook-1971": "For the nation—and for railroads, specifically—1970 fell far short of living up to the bright prospects which the '70s were supposed to hold. Not everything that is wrong can possibly be made right in 1971. But the whole process of righting wrongs has to start someplace and sometime. Railroads, for the most part, have started the process working. Government now has its opportunity to participate—actually, its obligation to participate. And the time for all of this to really get rolling is 1971."

Not every prediction made last year turned out right. But that one did. In 1971, railroads and government did begin to talk the same language, about problems and solutions.

Put it another way: If there were such a thing as a "moral victory," railroads had it in '71. But '72 is the time to turn the moral into the real. Railroads can't do it on their own.

THE STANDARD OF QUALITY— FORGED STEEL WHEELS, AXLES AND ASSEMBLIES BY STANDARD

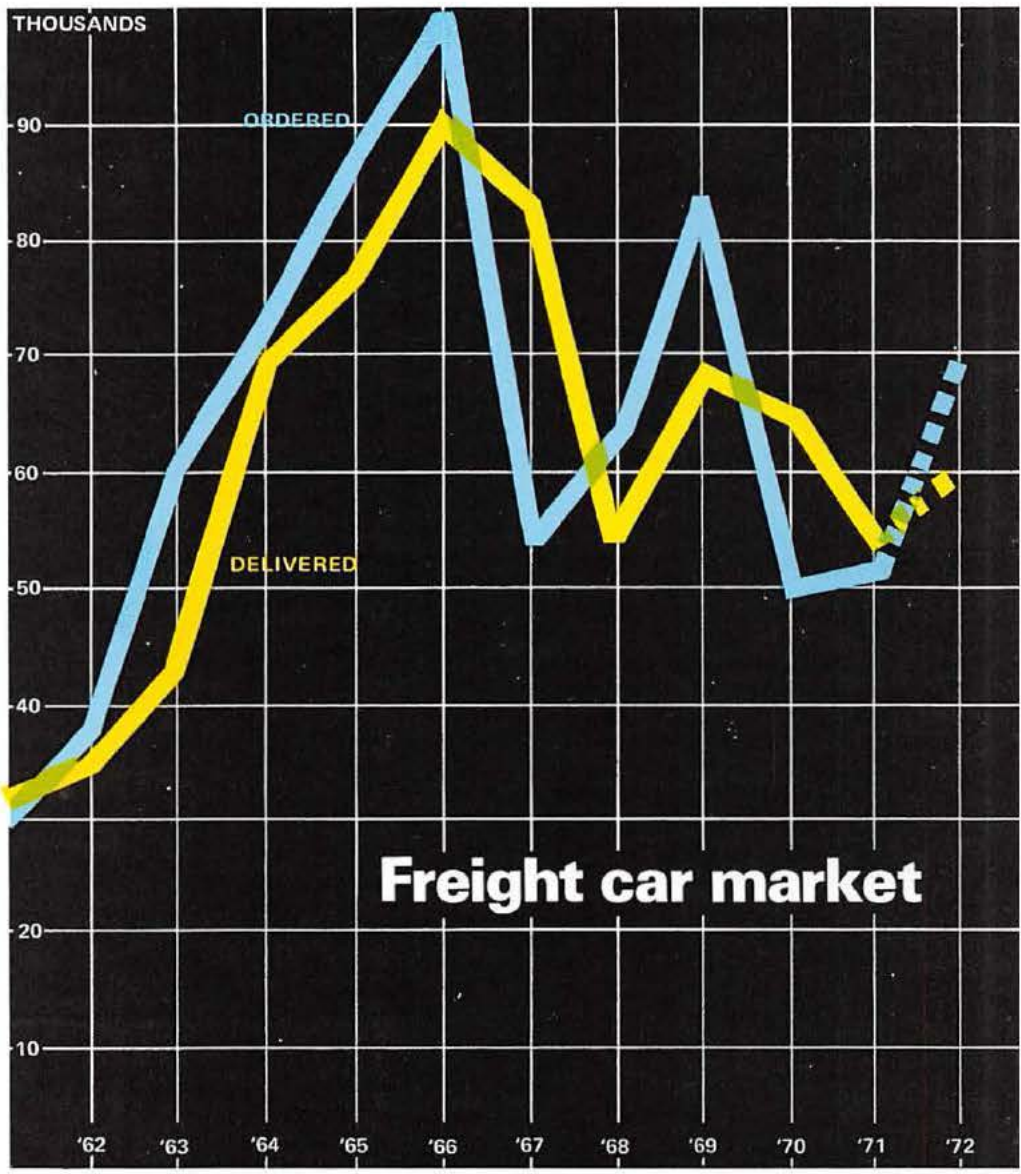
STANDARD STEEL BLH
A division of BLH Corporation
A subsidiary of Armour and Company

Circle 21 on coupon page 83

Car orders should top 70,000 this year

1972 OUTLOOK

By FRED N. HOUSER,
Mechanical Editor



Railroad carloadings were down several percentage points last year, so there was much less talk of car shortages. Which brings to mind the observation of Sir Winston Churchill concerning early Britons who relaxed as they watched Danish scout boats disappear into the North Sea fog. Soon the vessels were to return as the spearhead of a successful invasion. The Britons, said Churchill, "concluded the danger had passed by reason of the fact that it had not yet arrived."

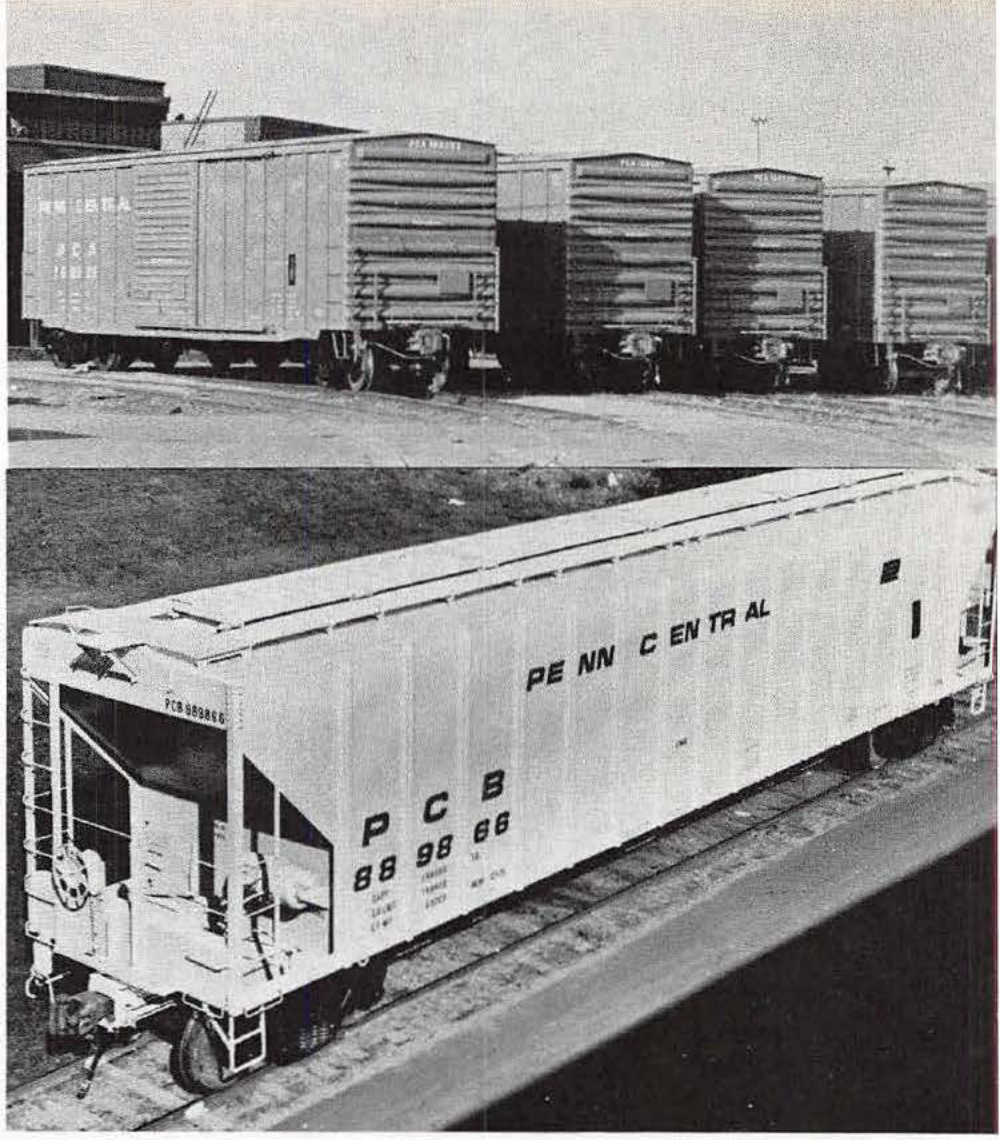
While there has been an increase in per-car capacity, the number of freight cars in interchange service has declined steadily, with only two interruptions, for the past 15 years. The U.S. fleet was down 9,600 cars from 1968 to 1969; down 11,200 more cars in 1970; and dropped an additional 12,900 cars last year. In the past ten years, despite the drop in ownership, cars have risen from 14% of net railroad investment to 30%, while revenue per dollar of car investment continues to decline. About 77% of all capital investment in the past decade, if the value of long-term leases is included, has been for rolling stock, including locomotives. The depleted cash position and operating results in the industry make it difficult to repay this investment. The railroads' ability to borrow is sharply limited, compared with earlier years.

● **Orders continue.** Not a very bright prospect, is it? In a period of tight money, high interest rates and an almost minuscule return on investment, the railroad industry placed orders for just over 50,000 cars in 1970 and something over 52,000 in 1971. That order rate should be up this year—probably to over 70,000 cars. Installations of new cars—65,000 in 1970 and 54,000 in 1971—were not at a rate that could overcome retirements.

Walter A. Renz, president of the American Railway Car Institute, advises that ARCI's Market Forecasting Committee (16 railroads, 14 major component suppliers and 9 carbuilders) has predicted that 65,000 new freight cars will enter the fleet this year. "Predicting demand," says Renz, "is comparatively simple but to correlate this with the roads' financial capability is somewhat more difficult."

ARCI Chairman Robert C. Ortner, president of Ortner Freight Car Co., views 1972 optimistically. "Economics, as always, will be the deciding factor as to whether railroads will acquire the equipment they need. Passage of the 7% investment credit, although not initially the stimulating factor expected, will assist marginal railroads to obtain necessary financing. Railroads must update their plants to meet the demands of a surging economy and vigorous competition."

A panel investigation of ways to increase freight-car ownership was sponsored last year by the National Academy of Sciences. After surveying the current situation, it was the consensus that there would be no huge freight car shortage in the next year or two, only evidence of occasional shortages. Then, said the group, the shortage of cars would gradually increase to serious proportions over the next 20 years



unless some strong and effective changes are made. It was agreed that it is economically unsound for railroads or any other group to provide sufficient freight cars to meet all peak demands.

Southern Pacific President B. F. Biaggini has observed that "we have to look forward to a tremendous growth in the demand for transportation over the next 10 to 15 years. And the railroads need much more equipment. You can't carry twice as much traffic without adding maybe 50% more freight cars, making allowance for improvements in utilization that will come with advanced computer techniques and things of that sort."

Biaggini has used a life span of 20 years for predicting the SP's car requirement. If one goes along with the more traditional 30-year life, maintaining the present fleet of 1.8 million cars would require an order rate of 60,000 cars per year, with no allowance for growth.

● **Too long?** Maybe it should be even shorter than 20 years. The chief engineering officer of a major carbuilder pointed out not long ago that "freight cars of the early 1960s are not doing a good job in the 1970s. The modern freight car simply does not stay modern long. In the remainder of the 1970s a half million cars will be built that will do a major portion of the rail haulage in the 1980s." He urged a concentrated research program to define the rail transportation problems of the 1980s with special emphasis on improved trucks, wheels, couplers and draft gears.

● **Technical problems.** Mechanical officers express considerable concern with air brake malfunctions, coupler passing, broken wheels and other component shortcomings. The industry has acted to end some of the technical problems associated with its car fleet, while apparently perpetuating certain others. Cars over 49 years of age are now prohibited in interchange service; a year from now the limit will be 48 years. By 1981 no car built in 1940, or before, will be permitted to continue in interline service.

Because of operational difficulties, there is a virtual moratorium on building any car over 89-ft 4-in. long, and constructing tank cars of over 100-ton capacity. Confronted with solid-bearing journal failures on 100-ton-capacity cars of all types, the AAR acted a while back to require installation of roller bearings by 1973. That deadline has now been set back four years with a restriction on the gross rail loads of such cars in the interim. A requirement for more stringent inspection of new wheels, when wheel manufacturers encountered equipment difficulties, was recently postponed ten months to Jan. 1, 1973. The AAR has announced it is beefing up its research budget for 1972, indicating that some of the major targets will be tank-car safety (a project in progress for nearly two years); couplers and yokes; solid and roller journal bearings; and truck side frames and bolsters.

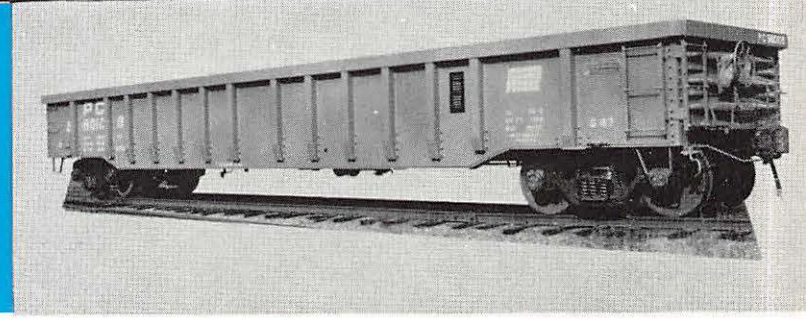
● **Optimistic outlook.** Car-supply problems confronting railroads seem to be the basis for considerable optimism on the part of carbuilders. Missouri Pacific President Downing B. Jenks recently stated that his road projects five years ahead on car purchases. "I would hope we can buy 3,000 freight cars a year," he said. "We retire between 1,800 and 2,000 yearly. At these rates we would have a net gain of about 5,000 cars over the next five years. And, if business increases the way we hope it will, we will need all that."

In explaining the higher budget for cars this year, Burlington Northern Chairman Louis W. Menk reported that "while the industry in general expects ton-miles to increase by about 50% in the 1970s, we expect BN will accomplish that in five years and double our traffic by the end of the decade."

Penn Central President William H. Moore cites "equipment aquisitions and repair to meet customer requirements" as a key to restoring PC's competitiveness. Last year PC got 7,500 new freight cars through long-term leases. The $130-million leasing program for 1972 involves 6,700 more cars—general-service and specially equipped boxes, covered hoppers, and 1,500 open-top hoppers.

Pullman-Standard's President E. T. Ahnquist recently predicted "substantial improvement for P-S and the rest of the railway equipment industry following a year in which we operated far below capacity in an economy that was sluggish and bedeviled by uncertainties, cost-push inflation and monetary problems. For our railroad customers the situation was aggravated by strikes against coal mines, grain processing and ports."

An upturn in the economy and passage of the investment tax credit will spur rolling-stock buying, says Ahnquist, "but wide-spread and large-scale ordering of cars may not materialize until well into the spring or even in the third quarter, when the economy should be in high gear. The turnaround should come this year although I doubt it will be dramatic."



PC: Bankrupt but acquiring cars

Penn Central leases ranked it right behind SP in car orders in 1971; PC will match that pace this year. ACF is building 1,000 box cars (top left). P-S has delivered 1,251 covered hoppers (bottom left). Bethlehem is assembling 2,250 open-top hoppers (above). U.S. Railway participation involves 567 box cars (top right). Fruehauf is building 2,000 gondolas (right).

Bethlehem found 1971 a better year for carbuilding than 1970, primarily because of large orders for open-top hopper cars. "As 1972 approached, an optimistic feeling was apparent throughout the industry," says John G. White, Jr., manager of Bethlehem's Railroad Product Sales. "As time passes, it is obvious that the year will begin at a very modest level. Delay in approving the investment tax credit and possible effects on car buying that may result from passage by Congress of one or more of the equipment bills have hindered the railroad industry's placing car orders.

"We are still optimistic regarding the number of cars to be ordered and produced in 1972, even though we may be well into the year before there is any surge of buying," concludes White.

● **Cautious optimism.** Fruehauf Railcar got off to a slow start in 1971 but the pace of operations stepped up as production of 2,000 Penn Central gondolas started. "For 1972, there are some reasons for cautious optimism," says Harry W. Crank, Fruehauf vice president and general manager. The tax credit and pending legislation "are steps toward a solution of the problems of the railroads and the railroad supply industry."

Fruehauf's backlog will carry well into 1972. The business upturn and railroads' need for equipment are reasons for optimism, says Crank. "However," he cautions, "if railroad equipment purchasing programs are delayed pending Government action on proposed legislation, 1972 could be no better than recent years."

● **New marketing areas.** Thrall Car credits its planning prior to 1971 for sustaining production and profit levels last year. Activity in 1972 "will be related directly to our ability to continue the development of new marketing areas and our continued success in helping customers with their financial and leasing needs," says C. M. Wright, vice president-sales. Thrall looks to reinstatement of the investment credit to stimulate both lease and purchase of new equipment by railroads and industry.

Rebuilding did much to keep U.S. Railway Manufacturing going during 1971, according to Ralph Bell, vice president-sales. Right now, however, even rebuilding is not meeting expectations. While covered hopper business did not develop as hoped last year, Penn Central's box-car leases did much to bolster the USRM situation.

● **Financing quandary.** There is promise about 1972, although Bell sees no large orders developing right now. Some key industries served by railroads will have to have more of an upturn before railroads and carbuilders will be out of trouble. One problem about building cars for lease to shippers, says Bell, is that you cannot take advantage of both the 7% tax credit and accelerated depreciation; the value of each to the carbuilder is about the same.

Union Tank Car, likewise, found difficulty with car leasing. New inquiries for tank cars continued to decline through 1971 so that the production for the year was only about 60% that of the average for the preceding five years. J. W. Kruizenga, senior vice president, marketing and fleet operation, attributes the decline to:

—Softness of the economy;

—Decline in capital spending in the petroleum and chemical industries;

—Switch of bulk liquid freight from rail to other modes;

—Improved shipper/user car control that improved utilization to permit movement of more tonnage with existing equipment.

● **Tank car shortage?** While not expecting a significant change in these four factors, "just a little improvement in the general economy during 1972 might be reflected in a tank-car shortage late in 1972 or 1973," observes Kruizenga.

And, he warns, "the prolonged debate among railroads, shippers and tank-car owners relative to tank-car mileage compensation has caused a breach in the working relationship between railroads, on one hand, and shippers and car owners on the other." Kruizenga believes "it is absolutely mandatory for railroads and car owners to join in a common marketing effort to persuade shippers that the transportation of bulk liquid freight by rail is the most attractive choice."

● **Trailer leasing.** With the downturn in piggyback traffic, there was substantially less market for trailers. Several trailer leasing organizations came on hard times. Take Consolidated General Transport. As compensation and traffic dropped, carriers utilized their own equipment and turned in surplus leased trailers. During 1971 Consolidated was forced to write off a substantial portion of its piggyback investment, finally indicating this business was being "phased out."

Early this month RT Systems announced that ownership of its subsidiary, TOFC, Inc., with trailer leasing and piggyback terminal operations, was being transferred in settlement of equipment obligations. Earlier over 200 TOFC trailers had been sidelined as excess equipment. ■

a step ahead with advanced technology

RELIABILITY

The transportation industry is entering an era of unprecedented challenge—an era in which the quick pace of growing America will severely strain conventional efficiency and reliability.

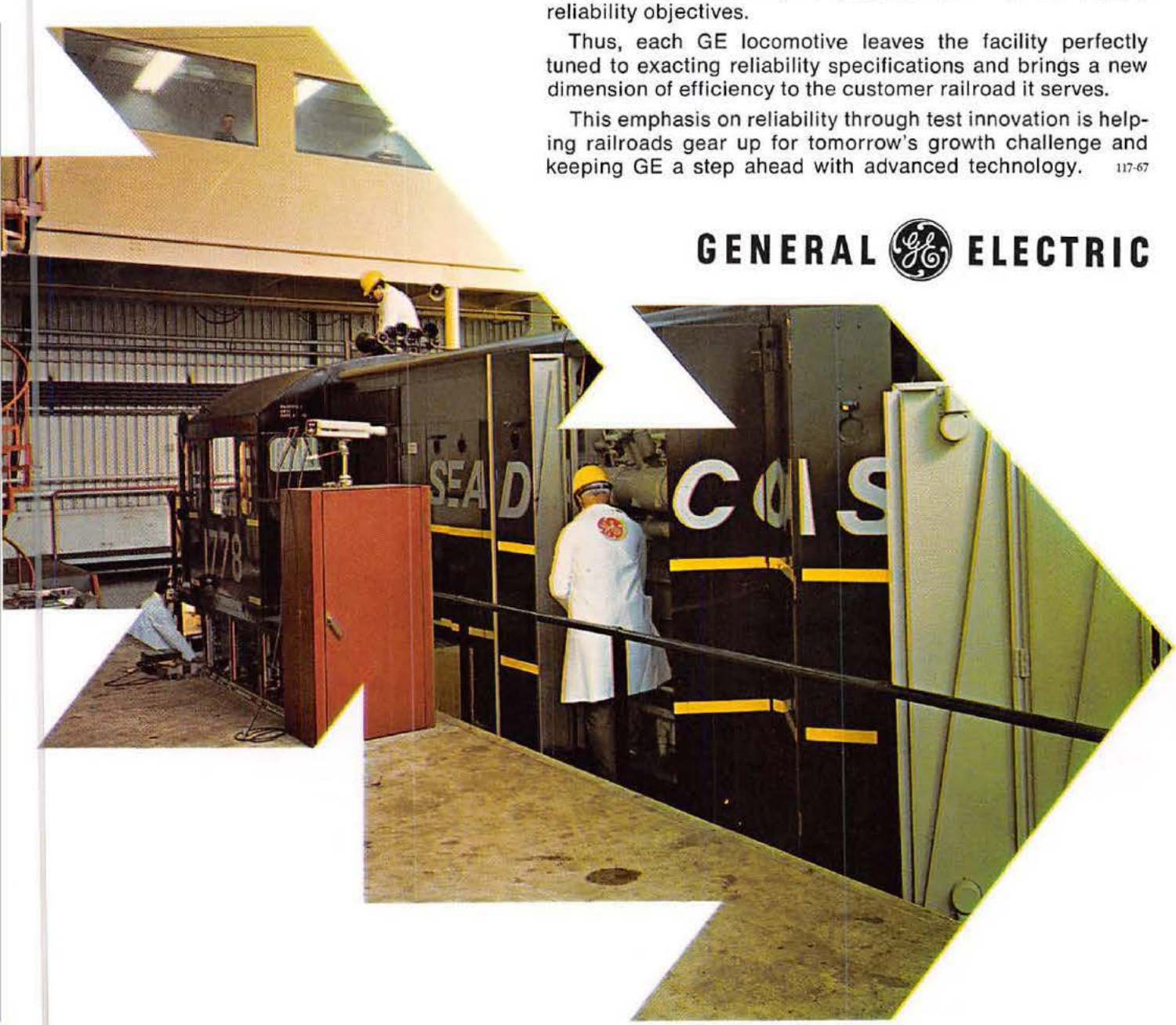
Recognizing that this new challenge can only be met with advanced technology, General Electric is responding with space-age computerized equipment in a new locomotive test facility.

Here, where high reliability is one key goal, knowledgeable engineers and technicians use closed-circuit television to precisely set engine/generator controls and time-sharing computers to accurately compare test data with established reliability objectives.

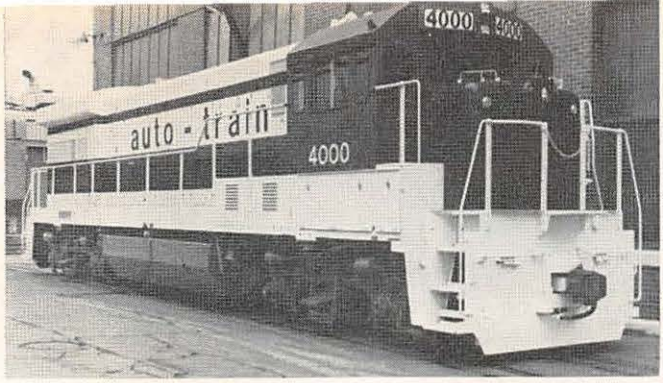
Thus, each GE locomotive leaves the facility perfectly tuned to exacting reliability specifications and brings a new dimension of efficiency to the customer railroad it serves.

This emphasis on reliability through test innovation is helping railroads gear up for tomorrow's growth challenge and keeping GE a step ahead with advanced technology. 117-67

GENERAL ELECTRIC



Circle 22 on coupon page 83



AUTO-TRAIN got five U36B passenger units from General Electric; P&LE was one of numerous roads getting Electro-Motive switchers; MLW delivered 4000-hp unit to CP Rail.

Locomotives: Better before bigger

1972 OUTLOOK

"Bigger and better" has been the slogan with which to promote both consumer and industrial products for decades. Right now, the builders of locomotives seem to be putting primary emphasis on "better." One need only observe the growing attention being given to reliability, maintainability and environmental acceptability to see this trend.

A few months ago, Penn Central's J. M. McGuigan, chief mechanical officer, suggested that it might be time for a change in thinking about the horsepower race—that "larger and larger locomotives may not be the solution."

Not that "bigger" is beyond the capabilities of current technology. In two decades the output from individual diesel engines in locomotive service has tripled. Both Canada's MLW Industries and Electro-Motive in the U.S. have produced single-engine locomotives in the 4000-horsepower range. While the North American railroad environment has given motive-power designers a generous clearance diagram, very high axle loads and the tradition of long, heavy trains to be moved, the drive for larger individual locomotive units may be losing some of its appeal. The large numbers of medium and low power units represented in orders during the past year indicate that railroads are now giving considerable attention to replacing or supplementing their fleets used in yards and secondary services. Increasingly this involves replacement virtually in kind; it is not easy to justify a high-cost 3600-hp unit in a yard.

● **What's next?** Will the trend to high horsepower be revived? Certainly when electrification gets the attention it has recently received from Southern Pacific, Union Pacific and Canadian Pacific, it is not easy to write off the allure of high power.

A five-fold increase in bulk materials traffic over its mountainous Calgary-Vancouver mainline sparked CP Rail's interest in electrification. The road moves tonnage trains over this route now with six to 13 diesel units.

With lengthened sidings and double tracking of certain segments, CP feels it could get by for another decade. Then the power situation gets a bit cloudy. Says Glenn Fisher, director of special projects: "We are studying substitution of electric traction to overcome some of the disadvantages of our lines—the grades and curves. Our reason is not disenchantment with the diesel locomotive, because that motive power has certainly proven itself. For the very heavy traffic densities we expect in a few years, electric traction is a very interesting alternative. On lines with steep grades, it should be possible to have train speeds equal to track speed limits through the whole territory—in effect producing zero grades."

● **Serious about electrification.** UP's John C. Kenefick recently told Railway Age that his road was "pretty well saturated" with high-horsepower diesels and is now concentrating on units of 3000-hp or less. He added that studies of electrification from North Platte, Neb., to Green River, Wyo., or Ogden, Utah, are being made in cooperation with the electric utilities and General Electric. "We're serious about looking into it," said Kenefick.

Electrification takes a high traffic density, notes SP President B. F. Biaggini. If SP were to proceed with electrifying the 900 miles between Colton, Cal., and El Paso, Tex., which it has studied, the flexibility of the existing diesel fleet would be affected. Now SP units can move between Portland, Ore., and New Orleans or St. Louis to assure maximum utilization. Putting catenary over the high-density segment of these runs would effectively divide SP's diesel fleet into two parts.

● **Environmental intrusion.** Biaggini adds: "Railroads move more freight longer distances with less intrusion on the environment than any other form of transportation. Generation of power at a central power plant to run an electrified fleet would probably put more pollution into the atmosphere than the total diesel fleet doing the same job."

Diesel fuel has risen 25% in price in the past few years and there are estimates it will rise another 20% by 1975. In the near-term, central-station-generated electricity will also go up rather steeply, although the utilities'

REMANUFACTURED 20-year-old EMD is ready for long-term lease by Precision National; GE MATE concept could give increased flexibility to many high-horsepower locomotives.

Edison Electric Institute insists that the cost will then stabilize. However, capital costs rather than energy costs seem to be the primary problem.

General Electric has received a contract from Arizona's Salt River Project for the world's first 50,000-volt alternating-current railroad electrification and for the 6000-hp electric locomotives which will haul 14,000-ton coal trains over this 80-mile automated railway. SP, UP and CP have all given consideration to a 50,000-volt a-c system in their electrification studies. As a preliminary to the construction of the three locomotives for the Arizona industrial line, Britain's BIC Construction Co., has completed the installation of the first 50-kv catenary system over GE's 3.4-mile test track at its Erie, Pa., plant.

● **Right now.** While there have been some problems in financing conventional diesel-electric locomotives for conventional services, the recent motive power market has not been characterized by the recession experienced in carbuilding. "By following a policy of steady locomotive-fleet modernization, railroads have been able to move 31% more ton-miles with the same number of locomotives," explains Olaf F. Vea, general manager of General Electric's Locomotive Products Department.

"Yet," he continues, "more than 25% of the nation's fleet is over-age. Therefore, in 1972, railroads are expected to pursue the same progressive purchasing policies they did in 1971, particularly with the additional support of the new tax bill." He expects about 1,100 units will be ordered by domestic railroads this year.

"Prospects continue to be promising in the export market," says Vea. "The President's economic policies are expected to stimulate this off-shore business which accounted for over 300 locomotives from American builders last year."

MLW is equally bullish about overseas orders which can be filled by Canadian builders. "The excellent cooperation of the Canadian Government has enabled MLW to offer competitive financing on overseas orders and has insured a high level of production and product development for 1972," says R. L. Grassby, president of MLW. "As a result of heavy bookings in 1971 from around the world, and the heavy shipments anticipated for 1972, the MLW name is becoming better known in the world railroad community as one of the foremost suppliers of motive power."

● **Many options.** Grassby points to the M640, the prototype 4000-hp road locomotive powered by the 18-cylinder Model 251 engine, as adding to the "extensive power options available in the 'M' line of locomotives." MLW's new export locomotives, the "MX" line, were designed to meet the requirements of overseas railways.

GE's Vea sees the predominant factors in future purchases of domestic power as being reliability, ease of maintenance, and control of emissions. Its engineering and manufacturing programs include "an increasing emphasis on advancing component and systems reliability, simplicity and the safety and emission aspects of GE locomotives."

● **New features.** Vea points to new standard features of GE's 1972 units—a fluid amplifier water cooling system, improved water seal integrity, the new AAR-approved three-handle controller, a new engine water filling and draining arrangement, and a new wheel-slip detection and correction arrangement.

The 1972 units from Electro-Motive have modular electrical control systems as their most significant departure. As many as 17 different control circuits have been modularized in plug-in form in the all-new high-voltage cabinet. Each of these modules is of an all-static design. "This new control system will go a long way toward improving the reliability and maintainability of our units," reports EMD's assistant chief engineer.

MLW reports that "considerable chassis and engine development work was undertaken in 1971 and this development activity will be sustained at a high level in 1972. The low-slung, high-speed diesel-electric for Canada's LRC (Light, Rapid, Comfortable) intercity passenger train (RA, Nov. 8, 1971, p. 29), being developed by MLW and two Canadian associates, will be pushed this year.

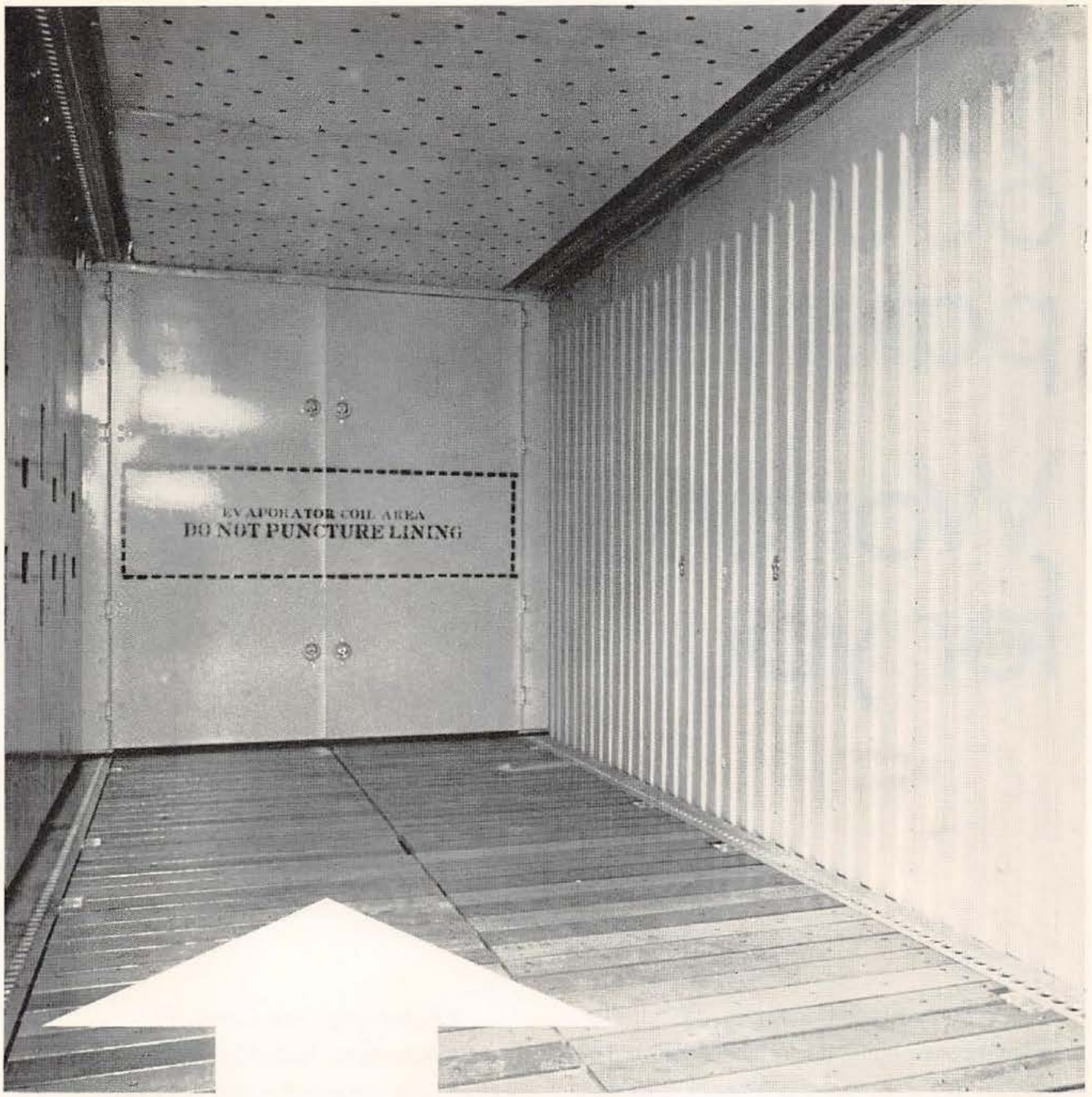
● **Greater return.** Railroads are always investigating methods of increasing the return on their motive power investments. Two significant development of 1971 were the introduction of commercially-built motorized trailer units without prime movers in road service and the emergence of commercial short-term leasing of motive power.

The co-called slug, a diesel-less unit with traction motors that supplement the capacity of motors on the diesel unit with which it is operated, has long been a fixture in many hump yards. In 1971 this concept moved from the yard to the mainline as Seaboard Coast Line put in service the first ten GE MATE (Motors for Added Tractive Effort) units and placed orders for 17 more. SCL teams its MATEs with its four-motor 3600-hp U36B units, making it possible to use these high-power locomotives singly on heavy, low-speed runs where otherwise two medium power units might be required for sufficient tractive effort.

Chicago & North Western has been utilizing its home-made road slug units in much the same way on low-speed secondary routes.

● **Power leases.** The evolution of a power pool, somewhat akin to that existing in freight cars, took on new importance during 1971. Precision National, which has remanufactured locomotives for some time, has expanded its pool of locomotives which are available to supplement railroads' own fleets. With a generally tight motive-power situation, and with seasonal peaks occurring regionally, the availability of modern units in prime condition on short- or long-term lease should fill a real need, says Precision.

Previously Precision had acquired aging units which were restored for additional service. It has had over 40 such units leased at one time to Class I roads, short lines, terminal roads and industrial operations. Now it is the new Precision policy to have units remanufactured with a life expectancy of 15 years. Morrison-Knudsen of Idaho has recently rebuilt three units and could also be giving serious consideration to a leasing operation. ■



KEMPLY® REEFER CAR BULKHEADS

Tough, heavy duty Kemply panels for bulkheads protect refrigeration equipment.

Thick, high-strength core resists impact; smooth, sanitary surface needs no painting.

Installs like ordinary plywood— available pre-cut to your specifications.

USDA ACCEPTED C&MS

Write today for complete information and sample.

MEMBER RPI

kemlite **KEMLITE CORPORATION**
Dept. RA
P. O. Box 429 • Joliet, Illinois 60434

Circle 5 on coupon page 83

We have over 600 working patents.

Working for you.

When you serve the railroad industry as long as we have, it is only natural that you would have some patents. But 600? That's more than any other company. Fact is, we're the world's largest producer of railway and rapid transit signal and control systems. Our products for improving rail service include:

- Centralized Traffic Control Systems
- Automatic Classification Yards
- Highway Grade Crossing Protection
- Automatic Train Control
- Automatic Train Operation
- Two-way Radio and Inductive Communications

And today, we have even more to offer with Sub-transit Monorail systems.

Want to know more? Contact Westinghouse Air Brake Company, Signal & Communications Division, Swissvale Post Office, Pittsburgh, Pennsylvania 15218.

WABCO

An American-Standard Company

Circle 23 on coupon page 83

Signaling: Safety will be a big plus

By **ROBERT W. McKNIGHT**
System Controls Editor

In the system controls area of railroad (and rail transit) operations, you look at 1972 with mixed feelings. There are many "ifs" clouding the picture. But there are enough breaks in the clouds to see that in a few specific areas there is good news for both users and suppliers of equipment.

"This is a Presidential year, and it is of utmost importance to the Administration to keep the economy aggressive. Pending legislation appears to have promise which will definitely help suppliers and railroads." That's how Henry Blackstone, president of Servo Corp. of America, looks at '72. With an upturn for Servo in the third and fourth quarters of '71, Blackstone admits that "our outlook this year starts off at a much higher reference point and we are quite optimistic." In addition to the election-year and pending-legislation factors, Blackstone cites a belief that "railroads, in many instances, have reached the point of no return on improving their facilities."

● **Federal aid for safety.** Another optimist is Robert E. Harmon, president of Harmon Electronics Inc., a supplier of hardware for railroad/highway grade-crossing protection. He predicts a 25% increase in business for Harmon—part of it based on a larger share of the market, "and some of it due to increased expenditure by railroads, particularly in grade-crossing applications where some Federal money is in the offing."

In a survey of some 50 U.S. and Canadian railroads by Railway Age, indications are that grade-crossing protection will continue to be one of the bright spots in the signal market picture during 1972. A sampling of returns indicates that the recent average of 1,300 grade crossings protected by automatic devices annually will be met or surpassed during '72.

Part of the pending Transportation Act in Congress provides that states must spend 5% ($250 million) and may spend as much as 10% ($500 million) of their Federal highway aid money for improving protection at railroad/highway grade crossings. Admittedly, the best protection is a grade separation or elimination. The separation route is an expensive one. However, in special cases, grade separations are being constructed where heavy vehicular traffic meets high-density, high-speed trains, as on Penn Central's New York-Washington mainline.

1972 OUTLOOK

Total '72 RSC market:

Capital Spending U.S. Railroads

Communications	$24.0 million
Data Processing	5.5 million
Signaling	27.5 million
Total:	**$57.0 million**

Capital Spending Canadian Railroads*

Communications	$20.5 million
Data Processing	2.5 million
Signaling	16.5 million
Total:	**$39.5 million**

Capital Spending U.S. & Canadian Transit

Communications	$ 5.5 million
Data Processing	0.6 million
Signaling	10.5 million
Total:	**$16.6 million**

Non-capital Spending U.S. Railroads

Communications	$33.5 million
Data Processing	75.5 million
Signaling	42.5 million
Total:	**$151.5 million**

Non-capital Spending Canadian Railroads*

Communications	$35.0 million
Data Processing	9.5 million
Signaling	25.5 million
Total:	**$70.0 million**

Non-capital Spending U.S. and Canadian Transit

Communications	$ 7.0 million
Data Processing	3.2 million
Signaling	8.0 million
Total:	**$18.2 million**

*Canadian National Telecommunications and CP Telecommunications are communications common carriers in Canada.

Note: Capital spending, as used here, refers only to planned equipment outlays and does not include related costs.

Note: Non-capital spending includes leased equipment costs.

States are also concerned with grade-crossing safety. Several are increasing the amounts available for providing automatic protection. California and Florida, to name just two, are stepping up their state-aid programs for grade-crossing safety.

● **Aid for transit.** The year 1972 promises to be a good one for rapid transit. Although the Washington Metro train control contract was awarded late last year, the money will be spent this year and next.

"This market is highly volatile and tends to fluctuate a great deal from year to year. A part of this is caused by the fact that many of the projects are large-dollar-volume projects which may take years in planning and procuring," notes Arthur W. Gebhardt, vice president-marketing of General Railway Signal Co.

Other major projects in the works include Toronto Transit's Yonge Street extension signaling, and Chicago Transit's $11-million cab-signal program for its North-South and Douglas Park lines. New York City Transit is testing automatic-train-operation equipment and expects to have this option available for future car purchases.

"We look for dramatically increased activity in the rapid-transit market in 1972 as compared to 1971. Most of the major transit systems should increase their procurements of our types of products in 1972," Gebhardt predicts.

● **Aci comes through in '72.** Like the proverbial prosperity just around the corner, automatic car identification will be one of the brighter spots in the rail system control area this year. For one thing, the climate is right for major installations of aci; it has proved itself on many railroads to be a practical, effective and economically-justifiable tool for improving operations. Several railroads have testing programs behind them—usually with one or two scanners—and are about to launch programs of installing scanners at major terminals and interchange points.

"The prospects for implementing the Chicago Terminal aci project in 1972 are very bright," reports L. A. Brophy, General Managers Association aci committee chairman. A request is now in the hands of Federal Railroad Administrator John W. Ingram for a demonstration grant for this project, which would consist of installation of 109 aci scanners at 40 locations in the Chicago terminal district, with scanners feeding data to a central computer for processing. In asking for Federal aid, the GMA said demonstration of this pilot project for terminal interchange and information of system capabilities can serve the government as a model for similar systems in all other railroad terminals in the country. GMA is asking for $4,886,900—the cost for aci scanners, site preparation, computers, soft-

Weir Kilby, Division of L. B. Foster Co., P.O. Box 12848,
Cincinnati, Ohio 45212. (513) 631-3440.

WEIR KILBY
A DIVISION OF FOSTER
L.B.FOSTER COMPANY

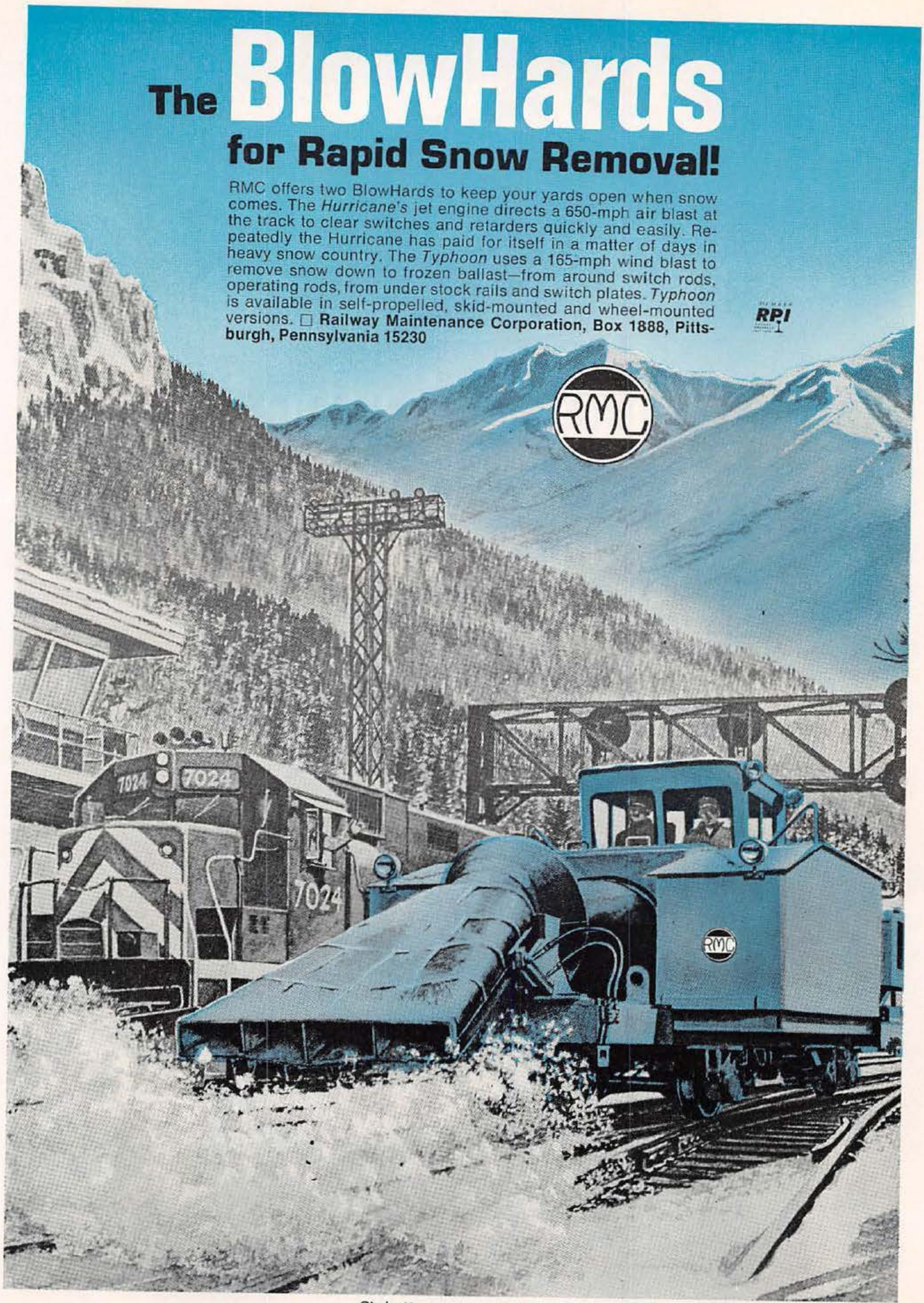
SOME 150 aci SCANNERS WILL BE BOUGHT IN 1972

ware and implementation expense. Total costs for installing and operating the system are, over a five-year period, $10,750,000—and benefits are estimated to total $14,327,000 over the same period.

of intelligence terminals (often employing a minicomputer). Direct input to magnetic tape units that eliminate keypunch operations is finding greater use. Also, several roads are installing optical character-recognition devices to directly

freight trains operate at 60 mph or more, or passenger trains at 50 mph or more. Present rules require signal systems where all trains are operated above 49 mph.

The continued emphasis on safety by


The BlowHards
for Rapid Snow Removal!
RMC offers two BlowHards to keep your yards open when snow comes. The Hurricane's jet engine directs a 650-mph air blast at the track to clear switches and retarders quickly and easily. Repeatedly the Hurricane has paid for itself in a matter of days in heavy snow country. The Typhoon uses a 165-mph wind blast to remove snow down to frozen ballast—from around switch rods, operating rods, from under stock rails and switch plates. Typhoon is available in self-propelled, skid-mounted and wheel-mounted versions. □ Railway Maintenance Corporation, Box 1888, Pittsburgh, Pennsylvania 15230
RPI
RMC
7024
7024
7024
RMC

Circle 48 on coupon page 83

◀ Circle 24 on coupon page 83

Signaling: Safety will be a big plus

By **ROBERT W. McKNIGHT**
System Controls Editor

In the system controls area of railroad (and rail transit) operations, you look at 1972 with mixed feelings. There are many "ifs" clouding the picture. But there are enough breaks in the clouds to see that in a few specific areas there is good news for both users and suppliers of equipment.

"This is a Presidential year, and it is of utmost importance to the Administration to keep the economy aggressive. Pending legislation appears to have promise which will definitely help suppliers and railroads." That's how Henry Blackstone, president of Servo Corp. of America, looks at '72. With an upturn for Servo in the third and fourth quarters of '71, Blackstone admits that "our outlook this year starts off at a much higher reference point and we are quite optimistic." In addition to the election-year and pending-legislation factors, Blackstone cites a belief that "railroads, in many instances, have reached the point of no return on improving their facilities."

● **Federal aid for safety.** Another optimist is Robert E. Harmon, president of Harmon Electronics Inc., a supplier of hardware for railroad/highway grade-crossing protection. He predicts a 25% increase in business for Harmon—part of it based on a larger share of the market, "and some of it due to increased expenditure by railroads, particularly in grade-crossing applications where some Federal money is in the offing."

In a survey of some 50 U.S. and Canadian railroads by Railway Age, indications are that grade-crossing protection will continue to be one of the bright spots in the signal market picture during 1972. A sampling of returns indicates that the recent average of 1,300 grade crossings protected by automatic devices annually will be met or surpassed during '72.

Part of the pending Transportation Act in Congress provides that states must spend 5% ($250 million) and may spend as much as 10% ($500 million) of their Federal highway aid money for improving protection at railroad/highway grade crossings. Admittedly, the best protection is a grade separation or elimination. The separation route is an expensive one. However, in special cases, grade separations are being constructed where heavy vehicular traffic meets high-density, high-speed trains, as on Penn Central's New York-Washington mainline.

1972 OUTLOOK

Total '72 RSC market:

Capital Spending U.S. Railroads

Communications	$24.0 million
Data Processing	5.5 million
Signaling	27.5 million
Total:	**$57.0 million**

Capital Spending Canadian Railroads*

Communications	$20.5 million
Data Processing	2.5 million
Signaling	16.5 million
Total:	**$39.5 million**

Capital Spending U.S. & Canadian Transit

Communications	$ 5.5 million
Data Processing	0.6 million
Signaling	10.5 million
Total:	**$16.6 million**

Non-capital Spending U.S. Railroads

Communications	$33.5 million
Data Processing	75.5 million
Signaling	42.5 million
Total:	**$151.5 million**

Non-capital Spending Canadian Railroads*

Communications	$35.0 million
Data Processing	9.5 million
Signaling	25.5 million
Total:	**$70.0 million**

Non-capital Spending U.S. and Canadian Transit

Communications	$ 7.0 million
Data Processing	3.2 million
Signaling	8.0 million
Total:	**$18.2 million**

*Canadian National Telecommunications and CP Telecommunications are communications common carriers in Canada.

Note: Capital spending, as used here, refers only to planned equipment outlays and does not include related costs.

Note: Non-capital spending includes leased equipment costs.

States are also concerned with grade-crossing safety. Several are increasing the amounts available for providing automatic protection. California and Florida, to name just two, are stepping up their state-aid programs for grade-crossing safety.

● **Aid for transit.** The year 1972 promises to be a good one for rapid transit. Although the Washington Metro train control contract was awarded late last year, the money will be spent this year and next.

"This market is highly volatile and tends to fluctuate a great deal from year to year. A part of this is caused by the fact that many of the projects are large-dollar-volume projects which may take years in planning and procuring," notes Arthur W. Gebhardt, vice president-marketing of General Railway Signal Co.

Other major projects in the works include Toronto Transit's Yonge Street extension signaling, and Chicago Transit's $11-million cab-signal program for its North-South and Douglas Park lines. New York City Transit is testing automatic-train-operation equipment and expects to have this option available for future car purchases.

"We look for dramatically increased activity in the rapid-transit market in 1972 as compared to 1971. Most of the major transit systems should increase their procurements of our types of products in 1972," Gebhardt predicts.

● **Aci comes through in '72.** Like the proverbial prosperity just around the corner, automatic car identification will be one of the brighter spots in the rail system control area this year. For one thing, the climate is right for major installations of aci; it has proved itself on many railroads to be a practical, effective and economically-justifiable tool for improving operations. Several railroads have testing programs behind them—usually with one or two scanners—and are about to launch programs of installing scanners at major terminals and interchange points.

"The prospects for implementing the Chicago Terminal aci project in 1972 are very bright," reports L. A. Brophy, General Managers Association aci committee chairman. A request is now in the hands of Federal Railroad Administrator John W. Ingram for a demonstration grant for this project, which would consist of installation of 109 aci scanners at 40 locations in the Chicago terminal district, with scanners feeding data to a central computer for processing. In asking for Federal aid, the GMA said demonstration of this pilot project for terminal interchange and information of system capabilities can serve the government as a model for similar systems in all other railroad terminals in the country. GMA is asking for $4,886,900—the cost for aci scanners, site preparation, computers, soft-

SOME 150 aci SCANNERS WILL BE BOUGHT IN 1972

ware and implementation expense. Total costs for installing and operating the system are, over a five-year period, $10,750,000—and benefits are estimated to total $14,327,000 over the same period.

Indications from railroads reporting in the Railway Age survey are that as many as 150 or more aci scanners will be purchased during 1972. "There will be an upturn in 1972 in the purchase of aci systems and equipment," predicts W. H. Thompson, president, ACI Systems Corp. "Several railroads testing or planning for aci have completed their studies and will undoubtedly make purchases in the coming year. Many have found the economies of combining aci with weigh-in-motion scales to be very attractive, and will make installations this year," Thompson said.

Another favorable factor for aci involves the AAR's task force effort to provide a truly national freight-car information and control system. The group, headed by R. P. de Camara, former Illinois Central vice president-administration, is determining ways to provide improved car-location information and hence improved car utilization to American railroads.

● **Ingenuity in communications.** This will be the first full year of no-shared Telpak for railroads. Also, communications common carriers have raised their rates. Generally, this means increased communications costs for railroads to reach their off-line traffic offices, and for some railroads who are wholly dependent upon telephone companies for their services. Some railroads are investigating the specialized communications common carriers, such as MCI Corp., and Datran, which will be providing services competing with the telephone companies.

This will be a year for the railroad communications officer to use his ingenuity in providing for continuing growth of communications by his railroad and in trying to keep costs in line. Fortunately, the relaxation on interconnection allows railroads as well as other businesses to purchase their own communications equipment and interconnect it with the nationwide telephone network.

● **Computer usage grows.** While most railroads show increasing interest in minicomputers, many are continuing to refine their procedures for handling data on large central processors. Many roads reporting in the Railway Age survey said they are using such techniques as coding waybill information to machine-produce waybills where repetitive data is a major factor. Also, more refined editing techniques are being applied at data origination points by use of intelligence terminals (often employing a minicomputer). Direct input to magnetic tape units that eliminate key-punch operations is finding greater use. Also, several roads are installing optical character-recognition devices to directly input data onto magnetic tape, eliminating the key-punch operation.

● **CTC tops signal work.** From the survey of 1972 plans, roads in the U.S. and Canada are planning to install centralized traffic control systems on over 750 miles of line. If these plans are fulfilled, the total for the year may well run to 1,000 miles, considering those roads whose plans were not finalized at this time. Two major operational trends are still in the forefront of signaling, namely centralized dispatching, and adjusting siding configurations to meet changing operating conditions. The latest road to be working on a fully-centralized dispatching operation is Denver & Rio Grande Western, which will be moving into a new general office this year in Denver.

Siding-location problems

When it comes to changing siding locations and configurations, some roads have mixed emotions. Most ctc installed in the late '40s and '50s had short or medium sidings (75 to 125 cars) spaced fairly close (five to seven miles). However, with high-horsepower locomotives, longer cars and higher speeds for non-stop meets, sidings have grown to 9,000 to 12,000 feet spaced possibly seven to 10 miles apart. But now, with an emphasis on service, some signal engineers and operating officers are wondering—maybe sidings should be for 60-car trains, spaced five miles apart. Fortunately, computer simulation is now available to aid in determining these siding configurations. Also, many railroads are using computer simulation to determine signal spacing changes required for operation of higher-speed freight trains that require longer braking distances than present signal spacing may allow.

Speaking of signaling, an informal conference was held by the Bureau of Safety, FRA, the AAR and the Brotherhood of Railroad Signalmen concerning proposed changes in FRA's rules, standards and instructions for installation and maintenance of signal systems. AAR and the Signalmen have commented on the preliminary draft rules. Proposed rules are expected to be published in the Federal Register next month. Changes are proposed to bring rules up to date in light of changing technology. One major change would require signal systems only where freight trains operate at 60 mph or more, or passenger trains at 50 mph or more. Present rules require signal systems where all trains are operated above 49 mph.

The continued emphasis on safety by Federal and state governments is impacting on railroads insofar as preliminary plans for 1972 show that more than 100 hotbox and dragging-equipment detector installations will be made during the year.

In another effort to reduce maintenance expenses, many railroads are continuing to install overlay track circuits at grade highway/railroad grade crossings to eliminate insulated rail joints. Another innovation to reduce insulated-joint usage (and annual maintenance) is to make track circuits longer by using center feeds, coded direct current or pulse modulated controls. Several railroads have more-or-less standardized on procedures to install longer track circuits prior to laying welded rail in signal territory.

● **Good but not great.** In summary, 1972 promises to be better than 1971 so far as system controls expenditures are concerned.

"As a general comment, we are forecasting a year that will be 5% to 10% better than bookings we realized in 1971," forecasts one major supplier.

Several trends will be noted in 1972:

—More purchasing of communications equipment by railroads and transit authorities due to increased rates by communications common carriers and greater freedom of inter-connection of customer-owned facilities with those of the public telephone network.

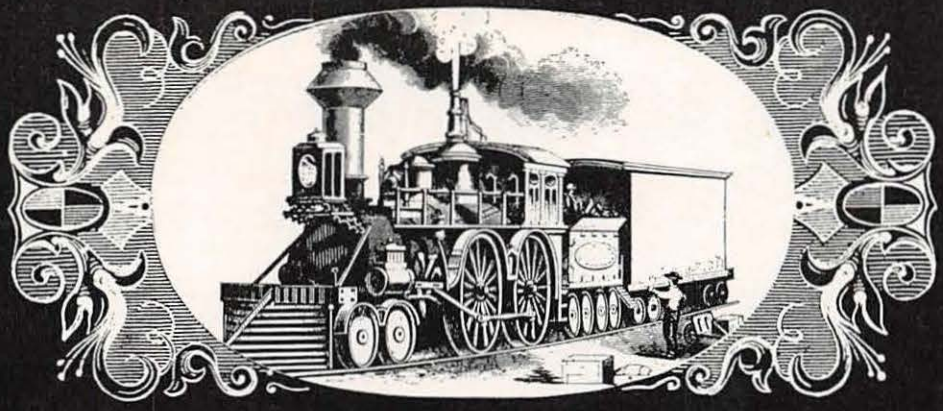
—Replacement will continue in the fields of two-way radio, channelizing and microwave equipment with solid-state designs supplanting older vacuum-tube models. As many as 600 radio sets will be replacement items in 1972.

—Data-processing trends will be in the areas of refining software, increasing use of minicomputers, eliminating of key-punch operations, and providing computer-generated microfilming to reduce computer printout paper volume.

—More than 150 aci scanners will be installed in 1972, and this may well be in addition to the 109 scanners proposed for the Chicago Terminal job.

—Centralized traffic control projects will total more than 750 road miles in '72, while more than 1,300 rail-highway grade crossings will be protected by automatic devices.

—Other signal devices with emphasis on safety will be increasingly employed by the rail industry, such as those 150 hotbox and dragging-equipment detectors. ■



Railroaders in the 1880's said we were the best darned trackwork people around.

Now we're even better.

We at Weir Kilby make frogs, switches and crossings. Our reputation reaches back to 1879. Even then we were considered the best. And we haven't let up yet.

Our experience has taught us more than quality, too. Dependable delivery. Ability to handle tricky trackwork situations. Topnotch people. All together, they make a good case for Weir Kilby.

Contact us for all your trackwork. Nineteenth century railroaders didn't go wrong. Neither will you.

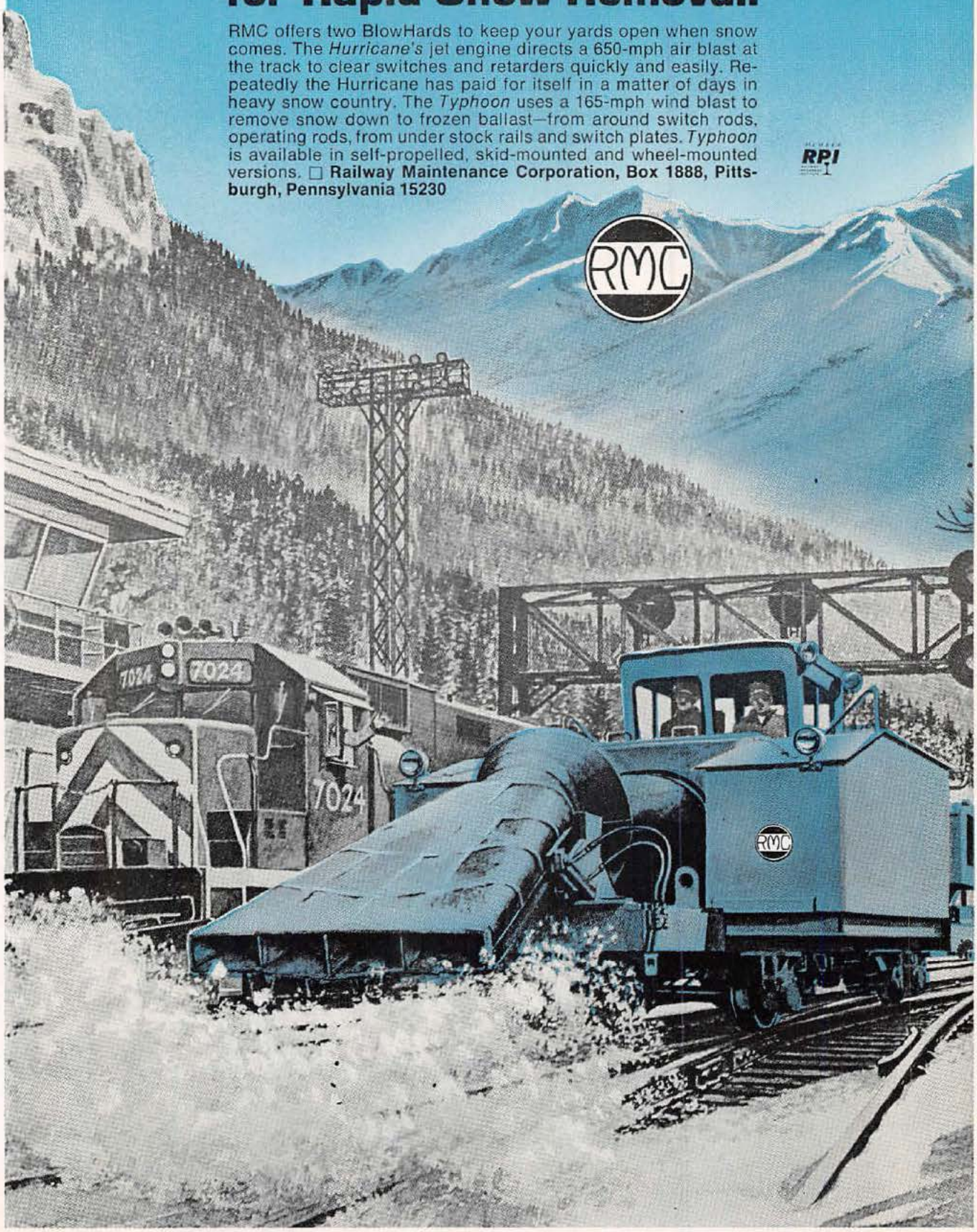
Weir Kilby, Division of L. B. Foster Company, 5038 Beech Street, Cincinnati, Ohio 45212. (513) 631-3440.

WEIR KILBY
A DIVISION OF FOSTER
L.B.FOSTER COMPANY

The BlowHards for Rapid Snow Removal!

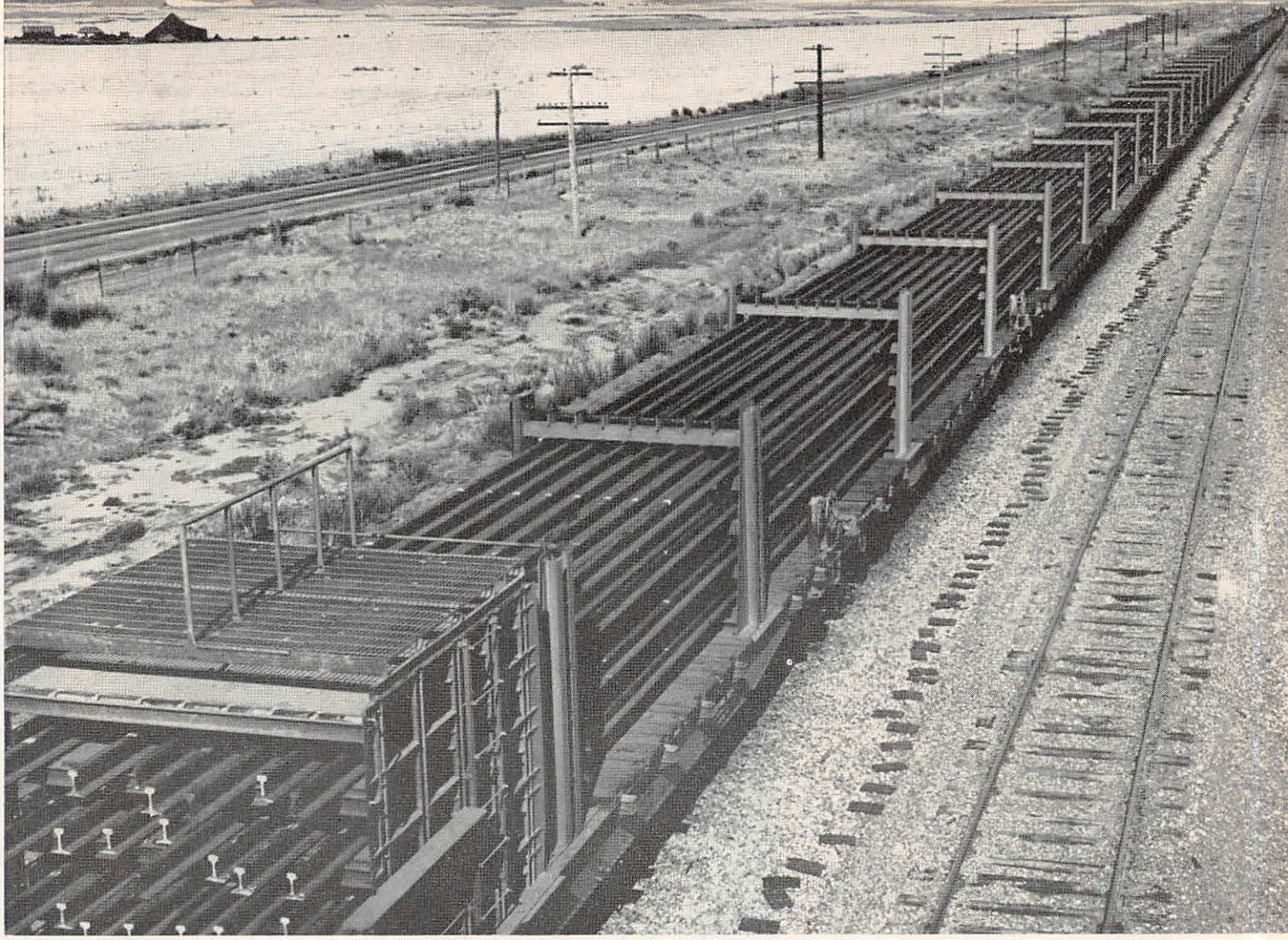
RMC offers two BlowHards to keep your yards open when snow comes. The *Hurricane's* jet engine directs a 650-mph air blast at the track to clear switches and retarders quickly and easily. Repeatedly the Hurricane has paid for itself in a matter of days in heavy snow country. The *Typhoon* uses a 165-mph wind blast to remove snow down to frozen ballast—from around switch rods, operating rods, from under stock rails and switch plates. *Typhoon* is available in self-propelled, skid-mounted and wheel-mounted versions. ☐ **Railway Maintenance Corporation, Box 1888, Pittsburgh, Pennsylvania 15230**

RPI



Circle 48 on coupon page 83

◀ Circle 24 on coupon page 83



Bigger M/W programs are planned for the current year

By **MERWIN H. DICK,** Engineering Editor

The FRA Track Safety Standards are now law: (1) It is broadly assumed that these standards are going to require many railroads to do more work on their tracks; (2) a Railway Age survey indicates that the major indices of M/W activity are going to be in an uptrend in 1972; and (3) a logical conclusion is that this uptrend is being sparked by the FRA standards, at least to some extent.

Logical as it may seem, however, this conclusion is wrong—at least it appears to be so, from the results of a canvass that was made of top engineering officers. In the canvass, made as part of a project to obtain information on the M/W programs of the railroads for 1972, chief engineers were asked to indicate whether their projections for 1972 had been increased due to requirements of the FRA standards.

1972 OUTLOOK

Twenty-two engineers replied—and the great majority said they are planning bigger programs in 1972. Yet, 16 indicated that their programs were not being increased as a result of the FRA standards. Only six said that increases were being charted for this reason.

Thus, apparently the FRA standards, so far anyway, have not been a big factor in mapping M/W programs. How about the years beyond 1972? Six of the 22 railroads replying to the canvass indicated that no increases in M/W expenditures would be necessary at any time in the future, while 10 said that increases for this reason would be necessary. Of the remaining six, five made no comment about the future effect of the standards. One chief engineer of a large road reserved judgment, saying: "We will observe developments as we go forward under FRA regulations and adjust our future programs accordingly."

As for the six railroads that indicated they would not have to increase their programs, now or in the future, because of the FRA standards, it will come as a surprise to no one that they are all relatively affluent railroads with comparatively high standards of maintenance. Included are three of the largest railroads in the country.

● **Postponing the inevitable.** A deduction that can be drawn from the

results of the canvass is that the majority of roads, sooner or later, will find it necessary to do some extra work on their tracks to bring them up to FRA standards. But apparently most of them are going to postpone the day of reckoning as long as possible.

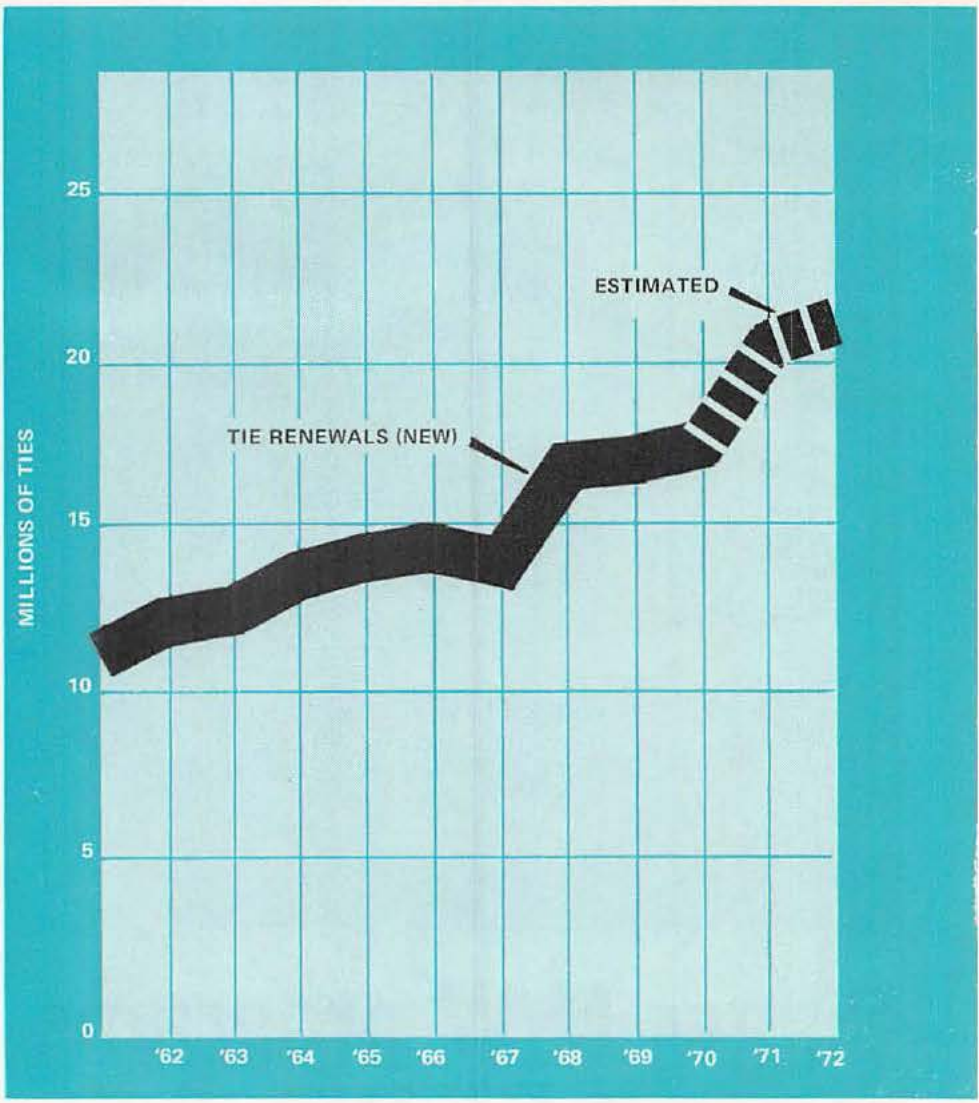
Several considerations may be behind this line of reasoning. One is the possibility that the standards may be softened, so, therefore, why perform work now that may turn out to be unnecessary after all? Another possible reason for postponing action is the uncertainty regarding what has to be done to bring tracks into conformity with the standards. Lack of money, along with the hope that business may improve later or that other sources or funds may materialize, are other possible reasons for delaying action for now.

These may be valid considerations, but at the same time railroads are not forgetting that some aspects of the standards become effective Oct. 16, 1972, for existing tracks and the remainder Oct. 16, 1973. Since those are the dates on which tracks must be brought into compliance with the standards, it is obvious that any work that may be required to produce this result must be planned and carried out with completion scheduled to take place not later than the deadline dates.

● **Easy to forecast 1973.** The main purpose of this survey is to forecast M/W activities for 1972—but at this point it might be easier to foretell in general what is going to happen in 1973. That year is almost certain to find many railroads struggling, perhaps desperately, to bring their tracks into conformity with the FRA regulations, unless, of course, extensions are allowed on a wholesale scale or modifications are made in the standards.

FRA standards may not be a big factor as railroads plan their 1972 M/W activities but it is apparent, on the basis of present planning anyway, that the programs are going to show increases ranging from small to substantial for the various categories of work. This conclusion is drawn from estimates of the work to be done in 1972, which were furnished by the chief engineers of practically all Class I railroads.

As a basis of comparison it is necessary first to give a Railway Age estimate of M/W work done in 1971, also based on figures furnished by the chief engineers. These estimates show that all major categories of M/W work were in an uptrend last year, the strength of the uptrend ranging from moderate to vigorous.



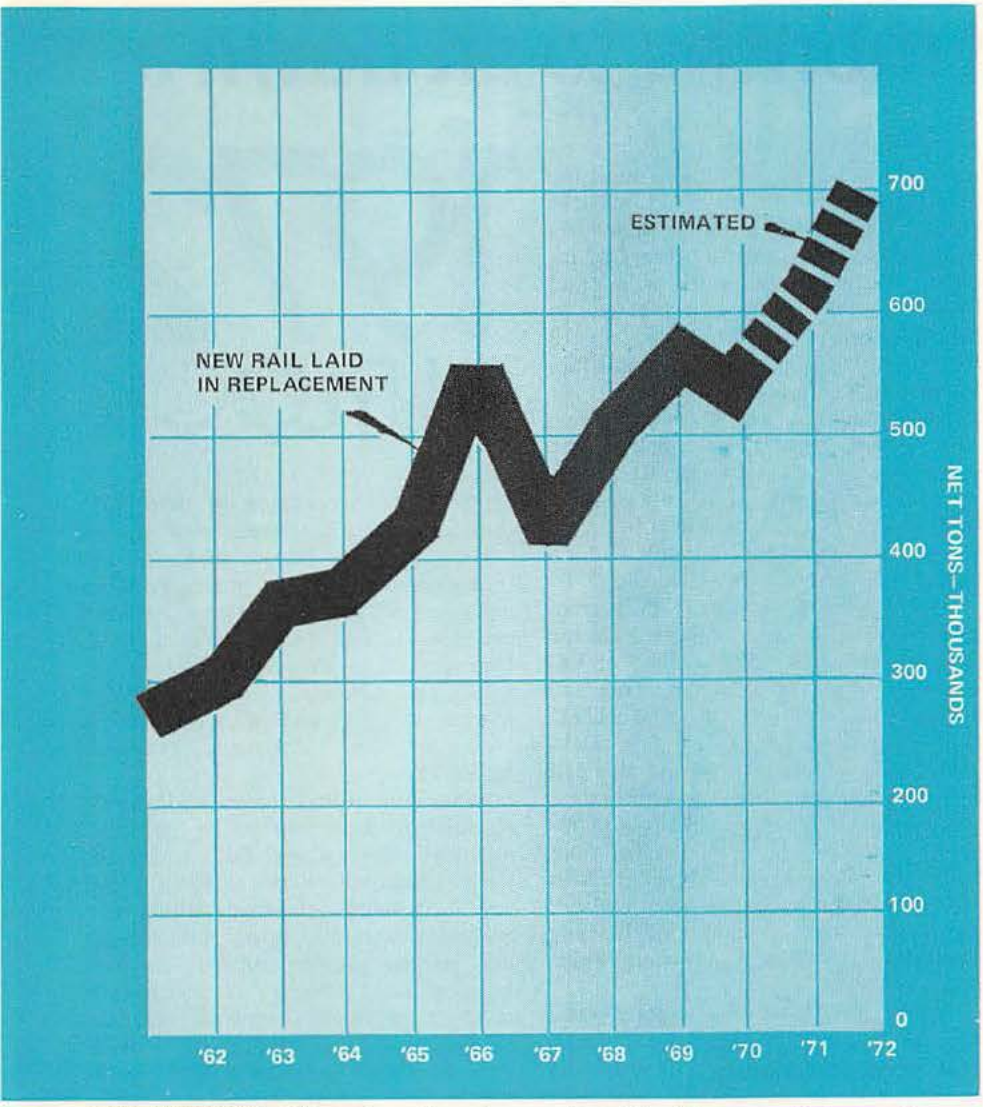
TIE RENEWALS have risen above the 20-million mark for the first time since 1957.

● **Rail, ties up in 1971.** Insertions of new rail for renewal purposes showed the strongest advance of any category of work last year. The estimate is that the Class I railroads installed 626,000 short tons of new rail last year, an increase of 18.6% over the amount laid in 1970.

Insertions of new ties were also up, but not as strongly as rail. It is estimated that Class I railroads installed 20,200,000 new ties for renewal purposes last year. Tie renewals thus rose above the 20-million mark for the first time since 1957. The estimated figure for 1971 represents an increase of 13.5% compared with 1970. From the chart it can be seen that insertions of new ties have shown an increase in every year except one since 1961. What this uptrend means is that ties that were put into tracks in large numbers during World War II are reaching the end of their service lives and are being replaced. Authorities on the subject anticipate that, even without the impetus of the FRA standards, the crosstie renewal curve should continue rising for some time yet before leveling off.

The mileage of track surfaced in 1971 was also up over 1971, but not spectacularly. Thirty railroads submitted figures on the amount of track surfaced. In 1970 these roads surfaced 34,212 miles of track. In 1971 the figure went up to 35,189 miles, representing an increase of 977 miles, or about 3.0%, compared with the previous year.

● **Rail to lead in 1972.** The projections for 1972, again based on figures submitted by chief engineers, indicate that rail renewals will again be the leader in setting the upward trend of M/W activities. The estimate is that insertions of new rails by Class I roads will move up to the 700,000-ton level. This would mean an increase of 74,000 tons, or 11.8%, compared with the estimated



RAIL RENEWALS will continue the strong uptrend that has prevailed recently.

figure for 1971. Thus, new rail insertions for renewal purposes in 1972 will be higher than for any year since 1957—if the forecast is fulfilled.

Question: If rail renewals go up nearly 12% in 1972 in the absence of major impetus from FRA standards, how much more would they go up if more railroads began in that year to bring their tracks up to the condition prescribed by the standards?

New ties—up slightly

According to the Railway Age estimates, insertions of new ties for renewal purposes in 1972 will also be up, but not much. The number of new ties inserted by Class I roads is expected to move up a notch to 20,500,000 this year, an increase of 300,000 ties, or only 1.5%, compared with tie renewals for 1971.

An expectation is that use of second-hand ties should continue to play an important role in track maintenance as railroads step up their abandonment of excess trackage. One large road estimates it may insert as many as 400,000 second-hand ties this year in bringing its tracks into conformity with FRA standards.

Even so, considering that an AAR task force estimated that railroads would have to install an additional 48 million ties by Oct. 16, 1973, to conform to the FRA regulations, it would seem that railroads will be getting a late start in bringing their tie condition up to the standards—unless, of course, tie-renewal budgets are revised upward later on.

Like tie renewals, track surfacing will show only a modest increase in 1972 compared with 1971. The 30 railroads reporting on this activity said they plan to surface 35,551 miles of track this year, a modest increase over the 35,189 miles these same roads said they surfaced last year.

● **Continuing evolution.** The maintenance-of-way field continues to undergo an evolution in the direction of more efficient and economical practices. The use of continuous welded rail is wellnigh universal for new rail installations, and the practice of welding second-hand rail for use on secondary lines is continuing to grow.

More and more, the long welded strings are being joined in the field by thermite-type welds.

Also, railroads are showing increasing interest in converting jointed track into welded track by joining rails with in-track welds. Just being introduced in this country is a method of butt-welding rails in track by the flash-butt process, using equipment originally developed in Russia. Equipment is also available for making in-track welds using the oxyacetylene pressure process. Another step forward in track welding is the increasing practice of butt-welding frogs at turnouts to the adjacent rails, thereby eliminating additional bolted joints and the cost of maintaining them.

The insulated joint is also getting increased attention these days, both by railroads and manufacturers. This is so because the insulated joint, being bolted, has become a vulnerable place in track that is otherwise constructed of continuous welded rail. The objective is to overcome this vulnerability by increasing the strength of the insulated joint. One method is to "glue" the joint with structural adhesives, sometimes also using special fastenings.

● **Track-measuring cars.** More interest is being shown in cars designed to measure the geometry of the track. This interest is sparked primarily by the desire of railroads to develop a means of providing a reliable yardstick for use in apportioning track-maintenance allotments. However, the existence of the FRA Track Safety Standards, with their precise stipulations regarding permissible variations in gauge, alignment and surface, would seem to require more exact and more rapid methods of measuring these parameters than are now in general use.

The FRA standards promise also to bring about another major change in track practices. Because of the need to maintain tracks to prescribed standards at all times, the probability is that railroads may have to step up their track-spotting activities. This could spell the end of cycle maintenance, which has been an important factor in helping costs under control. ■

"We have 18 months to sit down and

1972 OUTLOOK

By **GUS WELTY**, Senior Editor

Only the most dedicated optimist would forecast 1972 as "bright new era" time in railroad management/labor relations. At the same time, only the most dedicated pessimist could believe that things will be no better in '72 than they were last year.

For its part, rail management seems determined to move ahead on improving the climate of relationships with the labor organizations. Vice Chairman Maynard E. Parks of the National Railway Labor Conference put it well, in talking of "the start of a relationship between labor and the railroad companies that could be a model for American industry."

At this point, however, labor seems much less committed to cooperation. And the toughest talk is coming from the newest labor chief, United Transportation Union's Al H. Chesser, who says his first priority will be to make the carriers deal in more enlightened fashion with their employees. "Until the railroads create a better labor/management relationship," he declares, "we won't do a thing about cooperating with them on programs to their interest. . . . We won't turn a hand." And there's more: Unions, Chesser says, have tried to help out in the past, only to have the carriers "continue to kick workers around, intimidate them and put a knife in our back. . . . We've been down that rusty rail long enough. It's time to stop."

Only time will tell if Chesser's bark is worse than his bite. It could be that the bark reflects the understandable interest of a new chief executive in establishing himself as a militant defender of his members' rights—and in this contest it might be recalled that UTU's new president rose to the top on the legislative-representation side and not on the more traditional member-representation side which provides more direct contact with the membership. Suffice to say that Chesser is regarded as an extremely able individual—and as one of the most effective representatives organized labor has had in Washington. And until proved otherwise, it has to be assumed that despite the fiery rhetoric, this is not a man whose reflex-reply is "No" to anything management might suggest.

● **A time for talking.** Taking a broader view of '72, it might also be assumed that what happens over the next several months will set the pace generally for the year. Much has been made of the fact that in last year's settlements, railroads and unions took the long-term approach. As NRLC's Parks notes, "We stand at a unique plateau in relation to labor. After 12 years of intense bargaining on work rules and wages, we have contracts that extend to the middle of 1973. That gives us 18 months to sit down as friends and talk things out."

Unfortunately, not quite everything was settled before the books were closed on 1971. Two shopcraft unions are involved in holdover disputes. And, late into January, the much-heralded settlement with UTU was still tied up before the Phase 2 Pay Board.

Much depends on that UTU agreement, and on the way it works. Like the settlement with the Brotherhood of Locomotive Engineers which was reached in amicable fashion last year, the UTU agreement calls for wide-ranging work-rules change. Both agreements also call for creation of standing committees (management, labor and neutral membership) to consider many of the rules issues which remain unresolved. It is in this area that the most hope is held out for progress between now and the time the traditional bargaining process begins again in 1973.

At the turn of the year, nobody could say for sure exactly what the already-negotiated rules changes will mean. In theory at least, they should lead to a more efficient operation with substantial improvements in service, both over-the-road and within terminals. The generalization seems to be borne out by the recent experience of Chicago & North Western, which was party to the national BLE agreement and then reached an independent settlement with UTU.

At the same time, there is serious question as to whether the rules changes will bring anything significant in the way of cost reductions. Most operating officers agree that any savings to be gained will be a long time coming—and in the meantime, the agreements call for further wage increases in 1972 and '73. So the industry is faced with a situation in which it will be able to provide a better service for the customer—but at somewhat higher cost, because built-in cost increases will have to be somehow offset.

● **How people think.** In all of what happens this year and next, attitudes will be all-important. And it is encouraging to note that rail management talks freely of the need for partnership, the advisability of sharing savings and so forth. It is encouraging to note, too, that in certain key areas new people will be involved—people who may not be locked into old and progress-stifling positions. NRLC, for instance, is under new leadership with William H. Dempsey taking over as chairman a few weeks ago. Chesser, of course, is new-in-rank at UTU and so is the union's No. 2 man, Assistant President M. W. Hampton.

What does attitude mean, and what is required if there are to be improvements in relationships? Back to NRLC Vice Chairman Parks: "First, open and expanded communication—that examines facts and brings understanding. As the industry moves into new areas of more effective competition, it must be through teamwork with its employees. I'm talking about entirely new operating concepts, totally new approaches. We are facing new methods, new services, the application of new technologies—right now. And the nation's shippers, the public, railroad employees and the railroads can all benefit from them. I propose that we face the mounting demand for better transportation services in the years ahead—insofar as employment is concerned—on a basis of finding the best, the most effective ways of doing a job, then paying fairly for its performance. It may well be that there will be fewer employees in some categories—but I assure you, the jobs they have and the pay will be better."

Park's comments are echoed by another veteran of rail management-labor affairs, the recently-retired Guy E. Mallery, a vice president at Rock Island since 1958. Mallery also notes the chance for changed attitudes as leadership on both sides changes. And he adds: "I have hopes they'll reach an understanding. They have to, or they'll destroy each other."

● **There's progress—and progress.** Some would say that railroad management and labor people have, in the

talk things out"

past, shown a decided inclination for self-destruction——and that's a reasonable assumption to make, in terms of what most often surfaces publicly, which is conflict. But the past several years have also seen progress, agonizingly slow progress, but progress nonetheless at both the national and the local level.

A few years ago, for example, many observers would have doubted that the parties could ever negotiate anything like the work-rules changes contained in the agreements with the BLE and UTU. A few years ago, many observers would have questioned the ability of individual roads to do anything meaningful in the way of straightening out their own situations.

But today, the BLE and UTU agreements are a fact. Today, several roads (notably C&NW) and the operating brotherhoods have proved that change will work, that new operations and new services can be created, and that the employee really does have an interest in his railroad's success—even where sharp departures from past practices for the individual are involved. Skeptics sometimes like to point to the Illinois Central JOBS Commission to refute the idea that change is possible. JOBS, the doubters say, was just another highly-publicized idea that didn't work—because in a year and a half it has produced almost nothing. So far as they go, the doubters may have a reasonable argument. Certainly, the Commission's work has not progressed as far as hoped-for. But the skeptics may still be proved wrong: JOBS' life has been extended beyond the time when it could have ended; its scope has been broadened to cover both operating organizations; and there is every indication that its members have not given up on themselves or on their ability to work together.

One problem with almost any cooperative venture, of course, is the problem of determining goals—and this isn't as easy as it might seem. On both sides, there can be hangups—on the managerial side, perhaps a lingering reluctance to test the untested; and on the union side, perhaps an unwillingness to take a chance on something that might cost votes in the next union election. Most observers would guess that managers, generally, are becoming bolder. For one thing, top management is more encouraging of innovation than it used to be. For another, computer science, simulation and so forth can take a lot of the guesswork out of decision-making. The problem on the union side may be more serious. And, since unions can't be expected to rewrite their constitutions to take out the politics, this is something that will simply have to be worked around—somehow.

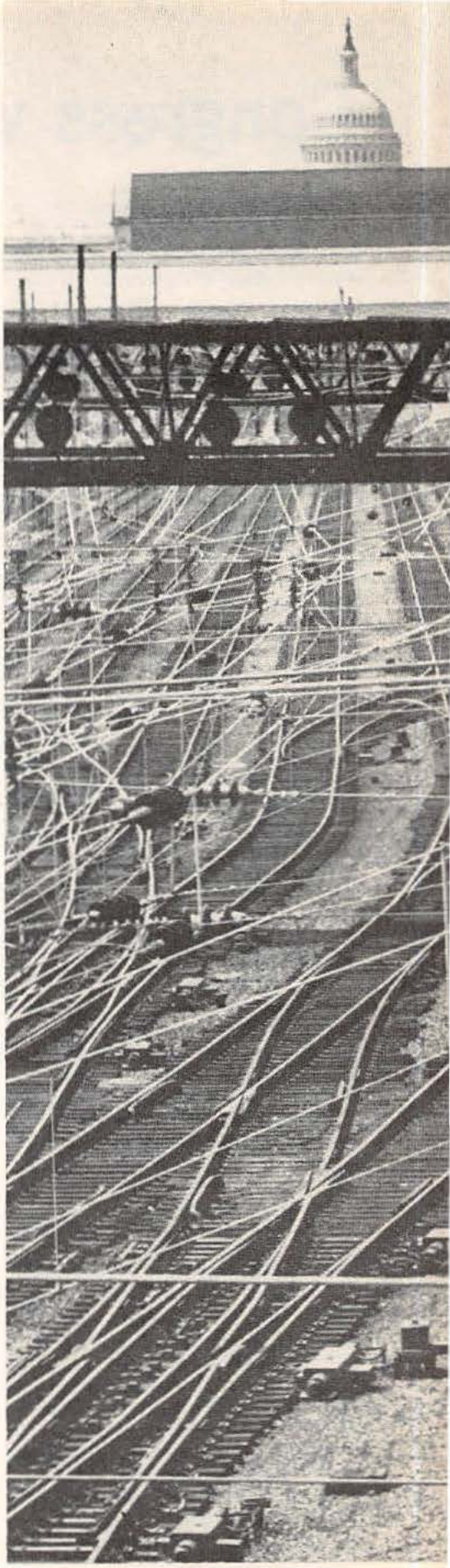
● **Upside outlook.** If you were to assess the potential in 1972 on the basis of what management and labor can do together—using both the broad work-rules agreements already negotiated and special-situations such as JOBS—you would lean to optimism. Changes in operating and service patterns can be made and they will be made—but probably more slowly than the industry or its customers would like.

Meanwhile, there may be fewer external forces working on the specific problems of rail management union affairs. This assumes that none of the few remaining "open" disputes comes to a flash point. It also assumes that Congress, in an election year, will be even more reluctant than before to tamper with the basic structure of the Railway Labor Act to provide for settlement-finality.

Chances are the courts, too, will be somewhat less active. And maybe they deserve a rest, since the 1971 calendar was dotted with major rail labor cases—one dealing with ICC obligations in merger-related labor protection, another putting teeth in the "every reasonable effort" clause of the RLA and a third upholding the right of a union to strike selectively.

Actually, it may take some time to determine the full meaning of these decisions. For instance, both carriers and unions have been known to lament the other side's failure to bargain in good faith. Now that the court's power to act has been upheld, perhaps "every reasonable effort" will become more meaningful. As for the decision dealing with selective strikes, the industry can only wait and see—and hope. Armed with that decision, UTU President Charles Luna cut a wide swath through the industry last year, cutting railroads down in bunches and keeping the first-chosen roads strikebound for 18 days.

If there is one big hope for 1972, it lies in the dialog employers and employees can begin—at all levels. The subject has to be change. And the dialog could produce surprises. Wouldn't it be something, for example, if union leadership discovered that the employee doesn't fear change as much as the leadership thinks he does? ■



THE '71 PICTURE was gloomier: Two-day Signalmen's strike in May idled this Washington yard—and worse was to come in the summer.

Congress will help—but when?

By **REID BEDDOW**, Washington Editor

1972 OUTLOOK

A strong conviction that something must be done is the parent of many bad measures.

—Daniel Webster

Emerson held that what Webster really meant was never to pass a bill today which he could defer till tomorrow. As the 92nd Congress returned to work Jan. 18 from Christmas recess, the wraith of Webster seemed to be steering rail aid legislation: All signs pointed to procrastination pending the result of the 1972 presidential election.

"How the hell can you expect Congress to do anything when Maggie is busy as Senator Jackson's campaign manager, Hartke is running for President, and Staggers is more interested in running a TurboTrain to Parkersburg, W. Va., than clearing bills from his committee?" asks a railroad officer.

"Maggie" is the affectionate nickname of Chairman Warren Magnuson of the Senate Commerce Committee. The other gentlemen, of course, are Chairman Vance Hartke of the Senate Surface Transportation Subcommittee and Chairman Harley O. Staggers of the House Interstate and Foreign Commerce Committee. They are the three men in whose hands the fate of rail bills now before Congress rests.

It is not necessarily true that their politicking this election year will slow-throttle these bills. Indeed passage of major transport legislation would be quite a feather in their war bonnets.

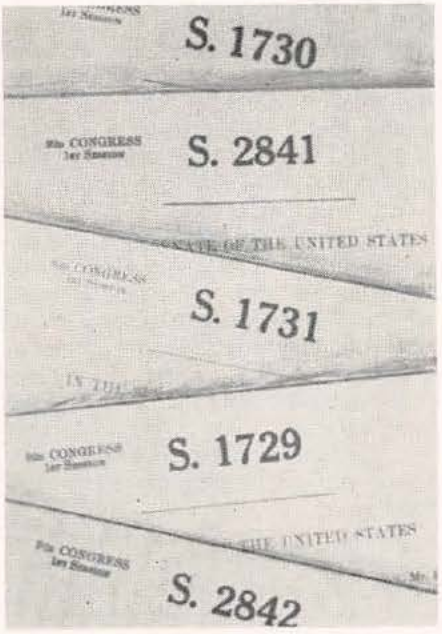
But lacking near-unanimity among shippers, labor, Administration, and industry, they will continue to move slowly or not at all on most rail bills this session.

Further, time *is* short. The Democratic National Convention begins July 10. The Republican convention begins Aug. 21. Even if Congress reassembles for the public business after the conventions (doubtful in itself), absenteeism will be rife as members campaign.

All this leaves a scant five months for Congress to consider the legislation rails most want—the Surface Transportation Act of 1971. And hearings on STA have not even begun in the House; they are not completed in the Senate.

That is the general picture; but despite its gloomy cast, rails do have a lot more legislative leverage than they had a year ago. Consider:

—For the first time in living memory, there is a formidable array of rail aid bills in Congress even besides STA (for their provisions, see RA, Nov. 29, p. 14) on which a lengthy public record and debate are being built up. Says one Senate aid: "The question is not so much whether Congress is going to help the railroads—but when."



—The investment tax credit, of itself one-tenth of the STA proposals, has already been enacted into law. When last in effect (1962-1968), the investment credit enabled rails to add $364 million to their capital spending.

—New and vigorous rail leadership in Washington has paid important dividends, which can only increase. AAR President Stephen Ailes this month completed his first year of an administration marked by the unprecedented alliance of rails with other regulated surface carriers to back STA. FRA Administrator John Ingram, in office only a short while, is a mover and shaker and is busy re-energizing his agency to give it more force in DOT councils.

—AAR and supplier advertising and grass roots-level information efforts on STA have reaped benefits unthinkable a few years ago: In December the California legislature endorsed STA and support of its principles was resolved by the Southern Governors Conference.

This leverage is bound to help as much and more in 1973 than this year, all of which is cheery, important, and interesting, except for the plain truth that the economic squeeze on rails hasn't let up much.

Despite record 1971 revenues of about $12.6 billion, the industry's rate of return hovered at about 2.53%. All right, so all U. S. industry had a bad 1970 and 1971, right? Wrong. Of major U. S. industry groupings, only airlines in 1971 had a rate of return as low as rails. The depressed steel industry had a 1971 rate of return on capital of about 3.4%. The aerospace industry, whose ills are much lamented in terms of unemployment and lagging exports, enjoyed a by-comparison hedonistic 5.8% return. In fact, virtually every other major grouping of U.S. industry finished 1971 with an above-6% rate of return, the vital level which rails need to meet 1980 service requirements. Drug and health manufacturers attained a 15% return. Banks reveled in a gilt-edge 12% return.

"I hate to say this, but the only thing than can push a rail assistance bill through Congress is a new rash of bankruptcies," says a rail lobbyist. With five Class I roads already in reorganization and 11 others operating at a deficit through the first nine months of 1971, that could happen.

As Illinois Central Chairman William B. Johnson said recently, "Even if the railroads have a 30% increase in earnings this year, they still would be earning only half of the return needed to justify the $3 billion annual investment they should be making in capital improvements."

Given the above and with incantations about the perils of crystal ball-gazing, here is a scenario for what will affect rails in Washington in coming months:

1. The Senate Commerce Committee may report out a bill containing some parts of STA and a Fastcor bill. These bills may even pass the full Senate, but they very likely will die in the House. The package may set up a loan agency for ailing carriers, possibly including airlines, but that agency will be empowered to lend far less than the $5 billion STA asks. If further railroads enter bankruptcy, additional emergency loan guarantees could hastily be passed.

2. Amtrak will get the $170 million it and DOT ask to cover the former's operating deficit until June 30, 1973.

3. There will thus be a huge spillover of proposals for rail assistance into the 93rd Congress convening in January,

C&NW's instant information service, using a computer and telephone facilities, can locate any car on the line in seconds.

Chicago and North Western tracks on any given day carry between 50,000 and 60,000 freight cars.

Clerks in 40 offices around the country can locate one or several of them in seconds, using a video data transmission system linked to the C&NW computer by telephone lines.

That sort of service is only one of the results of the information network Chicago and North Western has developed in consultation with the Bell System. Computerized work assignments for empty cars and idle locomotives are coming next.

Then computerized reconsignments and diversions of shipments.

And instructions to expedite one particular car in a train.

The goal of all this effort, of course, is to optimize car usage through the proper mix of computers and communications.

For details of how communications can help improve your operations, call your local Bell Company Communications Consultant.

The American Telephone and Telegraph Company and your local Bell Company are always looking for new ways to make the telephone work for you.

And put instant information at your fingertips.

WILL THE NEW INTERMODAL UNITY LAST?

1973. That Congress will probably be Democratic (33 Senate seats are up this fall—19 Republican and 14 Democratic). Messrs. Magnuson, Hartke, and Staggers will remain keepers of the keys. Such a spillover is no cause for despair. Next year, if not this, should almost certainly see passage of a bill prohibiting descriminatory taxation of carrier property. Reform of local property taxation (the main support of public schools) is high on both President Nixon's and Sen. Edmund Muskie's list for reform (Sen. Muskie is chairman of the Senate Intergovernmental Relations Subcommittee). Other provisions of STA, like swifter abandonment proceedings, will be re-introduced.

4. President Nixon's re-election, by nearly everyone's reading of the tea leaves, seems assured. His re-election would insure maintenance of the Volpe-Ingram team at DOT. Don't be too surprised if President Nixon unveils a hard-hitting domestic program during the campaign which includes implementation of the Northeast Corridor Report, especially a multi-million dollar upgrading of Boston-to-Washington track.

5. Whoever wins the presidential election and whichever party wins control of Congress, 1973 should see passage of a Federal revenue sharing plan. Some of the monies thereby channeled to states and localities will be allocated for transport, especially rapid transit.

Congress. Rail aid legislation wouldn't have got very far at all this past year without the unity of rails and regulated motor and water carriers in support of STA. An important question is: Will that unity last? Alliances are fragile things, and there are plenty of competitive traffic pressures ready to rip apart intermodal unity. Says a trucking lawyer: "I think it will last quite a while. The modes need each other. We've all got plenty of enemies who would like to see us nationalized and worse."

But broader support than that of the modes seems needed to push STA over (Rep. Brock Adams, the major House sponsor of the bill, has just introduced a fourth version of STA which makes airlines eligible for government-guaranteed loans in an effort to gain influential air support).

But shipper attention—fragmented between NIT League and rails' shipper advisory boards—for the most part is riveted on the Administration bills that (1) seek to modernize regulation (2) provide aid to rails. Although enjoying many similarities, STA on one hand and the Administration bills on the other are so far apart in other respects that a "harmonized omnibus bill" on which compromise could be reached is a virtual impossibility, in the opinion of at least one Senate aide.

Administration bill provisions for free entry into trucking and zones of reasonableness (from variable costs to 250% of variable costs), within which surface carrier rates could move up and down, are so experimental and controversial, with the financial consequences only dimly perceived, that little room for compromise exists.

NIT League will meet in Chicago Feb. 11—its second general membership meeting in three months—to adopt a clear-cut position on the Administration bills. NIT League's recommendations then could provide a clue to the text of a compromise STA of some kind, however unlikely that goal may be.

Another clue to Congressional intentions will be the reaction of key legislators to the Penn Central reorganization plan which is due this spring.

Senate report due soon

The Senate Commerce Committee's report on the causes of the PC debacle also is expected soon. The report, sure to be trumpeted by Sen. Hartke, will contain sensational allegations that have already appeared elsewhere, and in general will provide fodder for the Congressional sport of railroad baiting.

Finally, there could be a February dock strike which might force Congress to take up various bills requiring arbitration of transport labor disputes. Congress will run, not walk, for cover on a legislatively-imposed solution to transport strikes in an election year.

DOT. It is hard this year not to feel a sense of exasperation at senior DOT officials. The fact is, recent public statements of some officials have an almost Biblical flavor in that they can be used to demonstrate almost anything. Thus, Under Secretary James M. Beggs can be quoted to show his adamant support of a private rail system and the possibility of DOT itself proposing nationalization. Further, DOT, caught on the short stick when it comes to appropriations, too often resorts to puff and pizazz, excessive even for a cabinet department in an election year. As President Nixon himself recently said, "Where you need a lot of rhetoric, a lot of jazz, a lot of flamboyance, is when you don't have too much to sell." A case in point is the useless National Transportation Policy Statement DOT promulgated earlier.

Nevertheless, 1971 was a productive year for DOT and FRA. The issuance of track standards and the drafting of equipment standards (to be released, it is now said, next April), the designation of Amtrak's basic route system, the release of the Northeast Corridor Report —which clearly favored rail intercity travel over air and highway, the advancement of high-speed rail research, and the drafting of deregulatory legislation which, however controversial, is decidely bold and innovative are clear achievements—if these were normal times.

"I've never understood DOT's legislative game," says one longtime Washington rail observer. "They do anything to placate Harley Staggers—look at the people movers UMTA is building in Morgantown, W. Va., look at the TurboTrain demonstration to Parkersburg, where does it get them? What people want is foresight and leadership, and a lot of the activity from DOT is drift and endless compromise. The whole place is in hock anyway to aerospace and the airlines."

The observer (he is a labor economist) has an extreme view. And FRA Administrator John Ingram, now busy installing his own management team and setting up an FRA Office of Economics, is sure to represent forcefully a railroad viewpoint at DOT.

ICC. Rep. Wright Patman (D.-Texas), chairman of the House Banking Committee, recently alluded to the venerable Commission as "virtually a branch of the National Archives." Anyone, layman or lawyer, who has plowed through ICC reports and orders will understand Rep. Patman's meaning. Nevertheless, ICC enters 1972 with less insecurity than this time a year ago. Then, almost daily there were cries for ICC's abolition. Now anyway, ICC is hunkered down and out of the public eye.

In the coming year, however, President Nixon will appoint five, possibly six, new Commissioners. The terms of Laurence K. Walrath and Willard Deason expire Dec. 31. Both men say they will not seek reappointment. Appointments to fill the expired terms of Commissioners John W. Bush and Rupert L. Murphy are iminent. Both incumbents are said to be in trouble for re-appointment. Finally, members Dale W. Hardin and Donald L. Jackson, it is said, are restless and would like to go elsewhere.

Also, ongoing ICC investigations of immense import to rails will continue, though final reports are far off. These include determination of avoidable losses under the Amtrak act, adequacy of freight service (which will lead to service standards, and investigations of the rail rate structure and rate base. ■

OUR "RUN-THRU EXPRESS" MOVES THE WEST COAST 24 HOURS CLOSER TO THE EAST COAST.

We figured one thing the shippers in this country could use is a day off. Now you get it.

The Seaboard Coast Line, Frisco and Union Pacific Railroads have linked up to form the Coast-to-Coast "Run-Thru Express" train.

It runs daily with expedited service between North Platte, Nebraska and Jacksonville, Florida.

And fast connecting service is provided from all major western points to all major southeastern points.

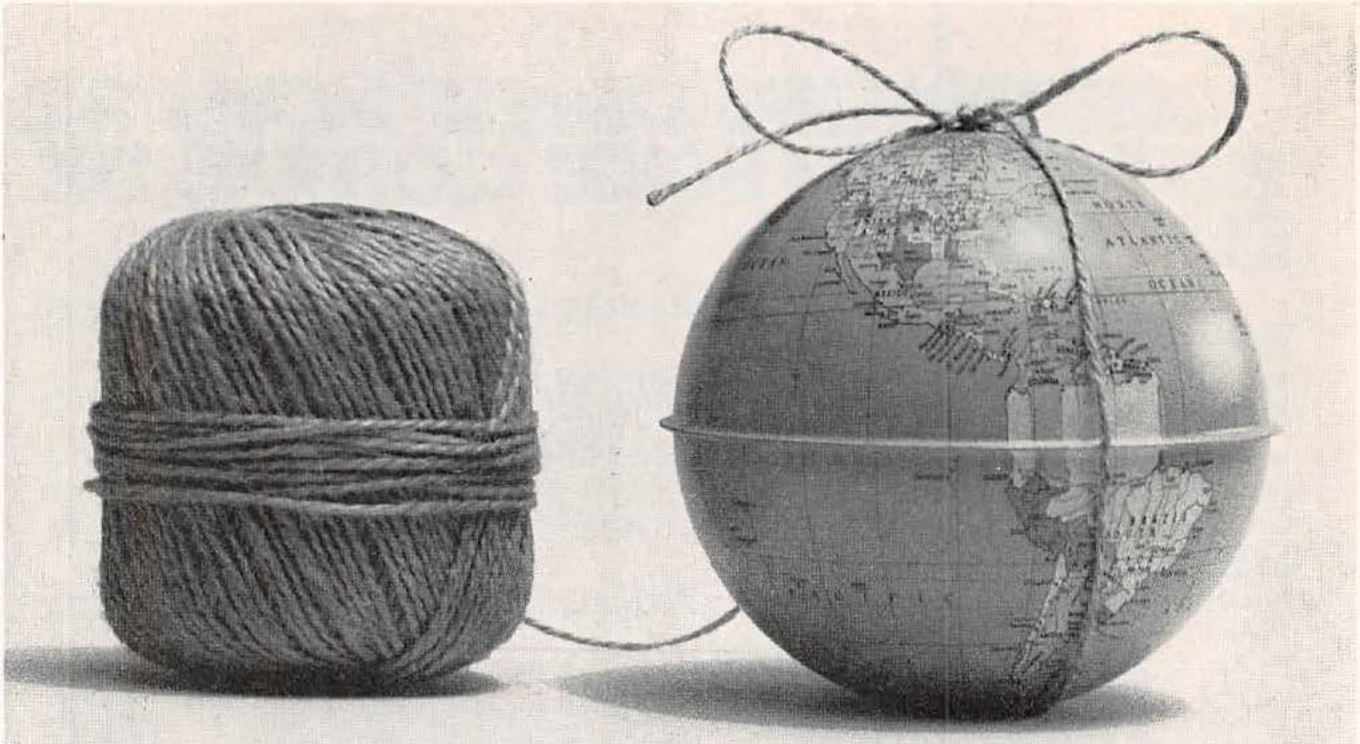
So from now on when you want to haul freight, ship via Seaboard Coast Line. And save a full day.

For information about freight service in the Southeast, see your local S.C.L. representative or write: Horace M. Emerson, Vice President - Freight Traffic, Seaboard Coast Line Railroad, 500 Water Street, Jacksonville, Florida 32202.

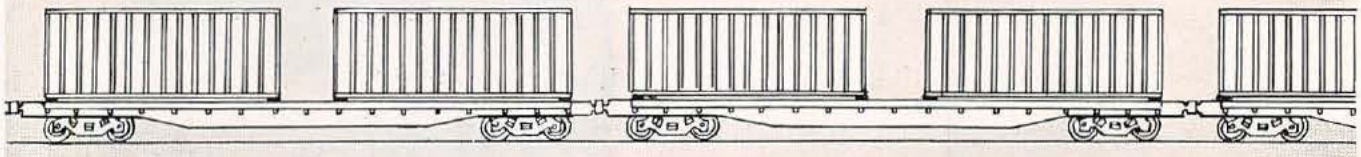
SCL
SEABOARD COAST LINE RAILROAD

"Nobody makes this run in better time than we do.
That's my railroad. Make it yours."
RICHARD L. LONG, ENGINEER.

Support ASTRO
for America's Railroads



string along with us... & we'll give you the world.



Containerization means all the world to all shippers. Now cargo goes directly into a container that goes by truck or rail or both directly shipside. Only two handlings instead of a dozen or more, thanks to practical and economical innovations like containerization.

KANSAS CITY SOUTHERN Lines

the uncommon carrier

Kansas City Southern offers importers and exporters direct service between Kansas City and five Gulf ports (New Orleans, Baton Rouge, Lake Charles, Beaumont, Port Arthur) —and offers information on shipping schedules, tariffs, and customs (here and abroad). No strings attached.

Kansas City, Missouri 64105
Telephone (816) 842-0077

Circle 25 on coupon page 83

the dollar saver

Universal®

MODEL 1900-DJ AUTOMATI

Slack Adjuster

The Model 1900-DJ Slack Adjuster assures proper pisto travel at all times, providing many dollar savings in yo labor costs.

It automatically adjusts for brake shoe wear, quickly, safely- brake shoe wear is adjusted upon the release of each brake a plication. The slack adjuster lengthens automatically when bra shoes are renewed—no manual adjustments are necessary.

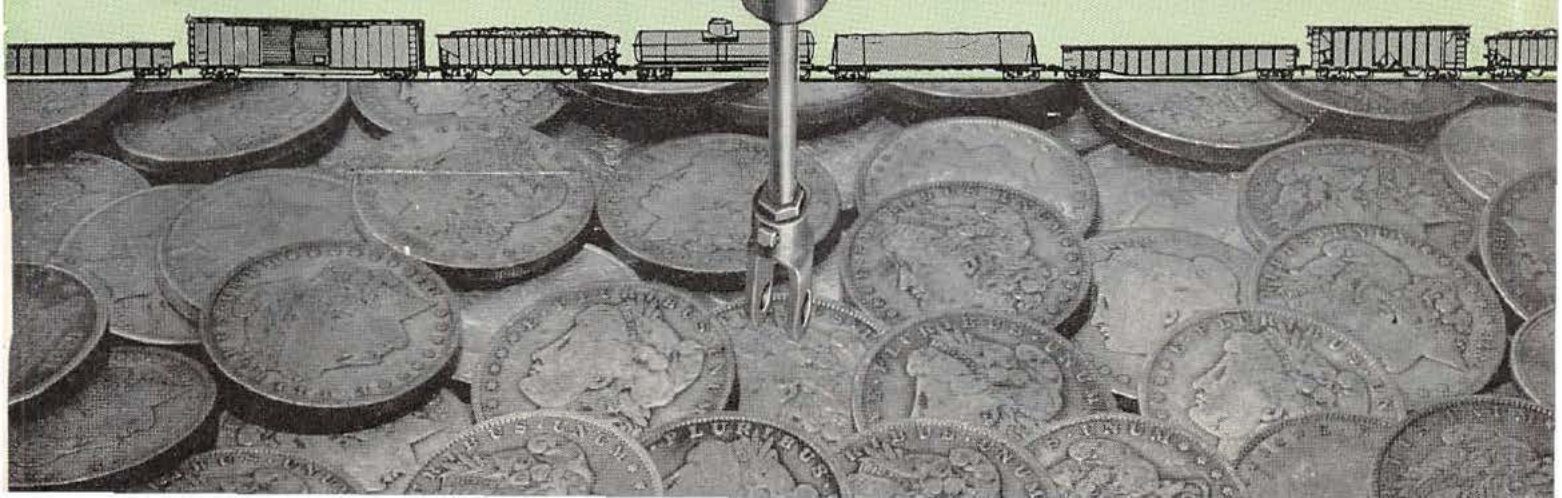
The Model 1900-DJ has been carefully researched, eng neered and tested for maximum reliability. THE UNIQU CONE CLUTCH MECHANISM HAS BEEN PROVE THROUGH YEARS OF SERVICE. All quality parts assu strength, durability and efficient performance.

Buy the Dollar Saver—Universal 1900-DJ!

UNIVERSAL RAILWAY DEVICES COMPANY

332 SOUTH MICHIGAN AVENUE • CHICAGO, ILL 60604 • TELEPHONE: 312-427-5051

CANADIAN CARDWELL COMPANY LTD., 1875-46TH AVE., LACHINE 620, QUEBEC • TELEPHONE: 514-636-4864



Chico now has a helper to tell you about

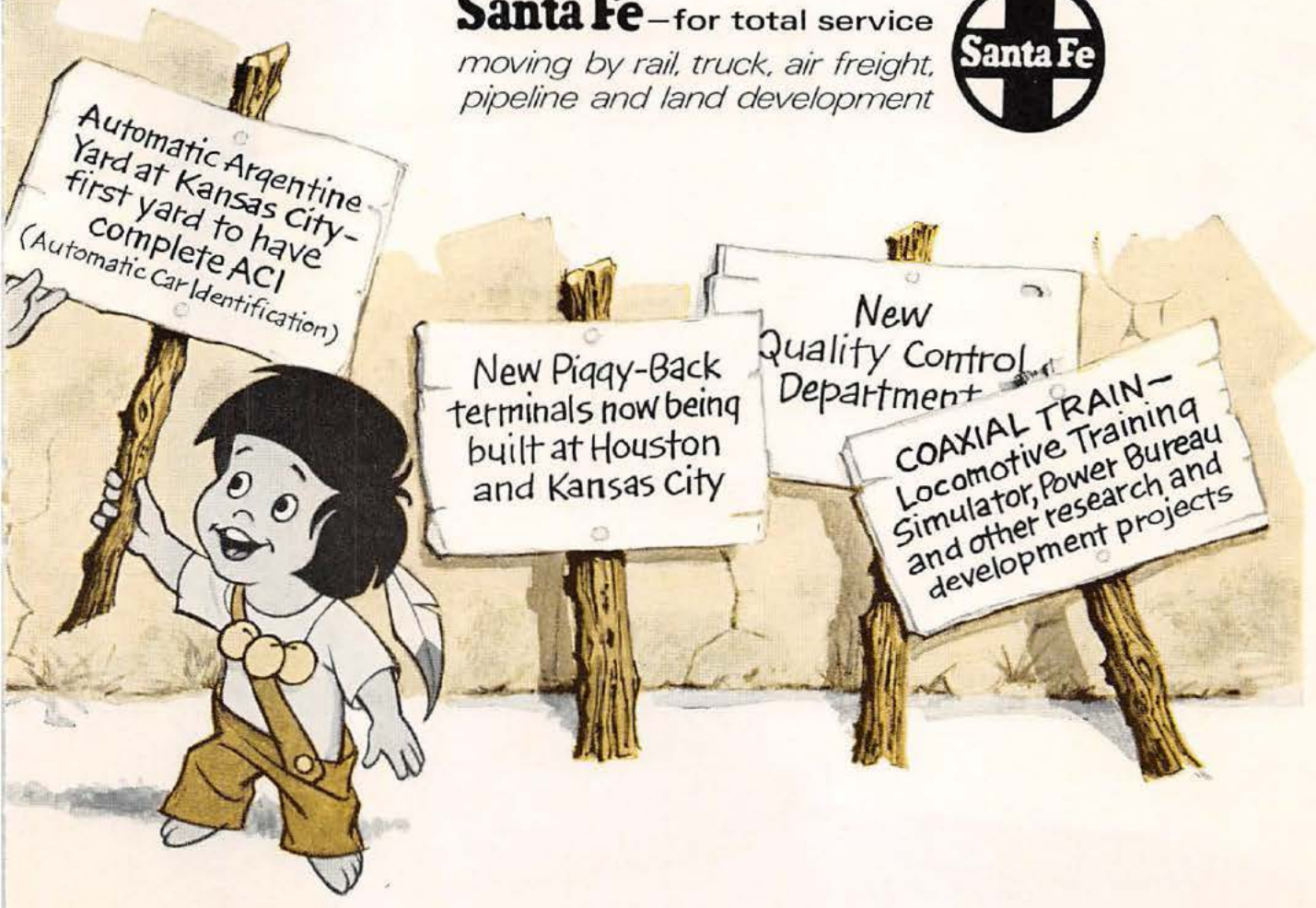
the NEW IDEAS AT WORK on the Santa Fe

There are signs of progress all along the Santa Fe. ■ New run-through trains with connecting railroads providing more efficient nationwide freight movement. ■ New construction now underway for expanding Piggy-Back terminals that will give better service for shipments moving by rail and truck. ■ A new Quality Control Department to develop better methods of freight handling. ■ Research and development projects are perfecting new ideas in operations; also data systems linked with microwave communication are resulting in better utilization of cars and diesel power. ■ All of this in addition to faster service made possible with our multimillion dollar automated Argentine Yard at Kansas City and a rail-truck terminal at Dallas, both completed within the past year. ■ And remember ..... Santa Fe goes ALL THE WAY between Chicago and California.

Chico and his helper are symbols of the friendly way everyone at the Santa Fe wants to help with your transportation needs. Call one of our traffic representatives today—we have 88 rail, truck and air freight offices located across the nation and in Mexico.

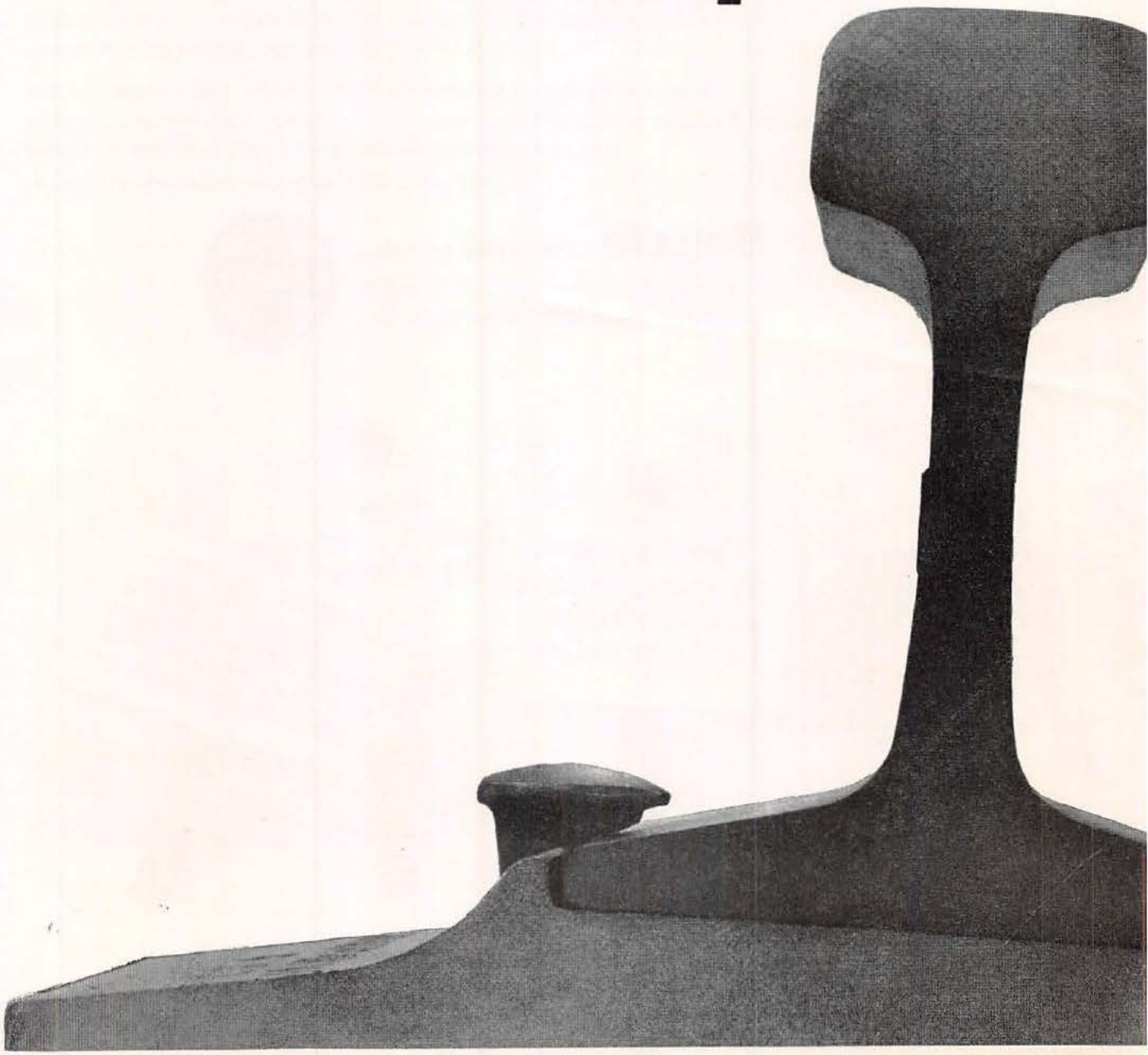
Santa Fe—for total service
moving by rail, truck, air freight, pipeline and land development

Santa Fe


Automatic Argentine Yard at Kansas City—first yard to have complete ACI (Automatic Car Identification)
New Piggy-Back terminals now being built at Houston and Kansas City
New Quality Control Department
COAXIAL TRAIN—Locomotive Training Simulator, Power Bureau and other research and development projects

Circle 28 on coupon page 83

Hi-Si® rails. Hi-Cant tie CF&I's answer of heavy traffic.



plates.
to the heavy stresses

Several of our large railroad customers have taken a strong new step in the battle against rail wear. The step we're talking about is two-fold.

First, our Hi-Si (high-silicon) rails. Which have proven themselves on curves. And on tangent track.

Second, our Hi-Cant tie plates. In the past three years of use, this innovative hardware has significantly lessened curve wear on the gauge side of rails and reduced metal flow.

Hi-Cant tie plates cause wheel loads to be distributed uniformly across the running surface of the rail rather than to be concentrated at the gauge corner.

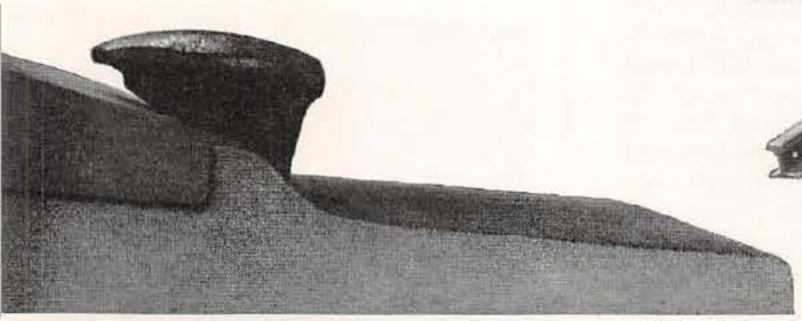
The astonishing result in one case was that the mill scale was still intact on the gauge sides of high rails 3½ to 4 months after installation. Months later, the customer reports "We have had absolutely no wear on the gauge corners of rails in which the Hi-Cant tie plates were installed."

This same customer has now standardized on Hi-Cant tie plates in conjunction with his regular rail laying program. To further reduce rail wear and shelling on curves, he has also begun the practice of installing our Hi-Si rail on both sides of curves in excess of 4 degrees.

If you're concerned about costly replacement demands due to heavy shelling and premature rail wear, by all means talk to CF&I. The steel men who helped build the West are ready with new products and processes to keep you rolling. Like our Hi-Si and Hi-Cant, for example. In combination or individually.

Write us for our complete Railroad Information Package. Write CF&I, Pueblo, Colorado 81002. **We serve you right.**

CF&I Steel Corporation
Pueblo, Colorado
A subsidiary of Crane Co.



Circle 29 on coupon page 83

Watching Washington

REID BEDDOW

MAY DAY

Nine railroads have until May 1 to make final payments on $90.4 million in Federally-guaranteed loans unless Congress acts swiftly to extend the due date. The $90.4 million is outstanding under the 1958 law which expired in 1963 and under which $243.9 million was lent to various roads. Of that total rails have paid back $78.5 million. Another $75 million was paid by Uncle Sam after the New Haven, Penn Central, Jersey Central and Boston & Maine defaulted. The nine roads and the amounts still owed are: Chicago & Eastern Illinois, $5.9 million; Erie Lackawanna, $12 million; Katy, $29.6 million; Monon (now part of Louisville & Nashville), $6.7 million; the bankrupt New Haven (taken over by PC), $2.2 million; New York Susquehanna & Western, $100,000; Norfolk Southern (which is a candidate for merger with the Southern), $5.4 million; Pittsburgh & West Virginia, $500,000 (now part of N&W) and the bankrupt Reading, $28 million.

A REPRIEVE?

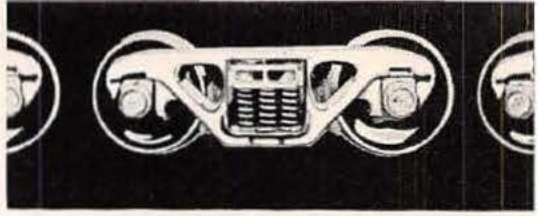
The AAR last October asked Congress to enact a new law extending the guarantees for a further 15 years at presumably renegotiated interest rates. Sen. Lloyd Benson (D.-Tex.) and Rep. John Jarman (D.-Okla.), chairman of the House Transportation Subcommittee, introduced bills (S. 2681 and H.R. 10925), to do just that. Neither bill has reached the hearing stage.

Now, however, it has been learned, there is the possibility of a separate legislative extension. A working draft in the subcommittee of H.R. 11384, the bill extending the Federal Railroad Administration's high-speed ground program for three years and appropriating $300 million for this purpose, contains a rider extending the loan guarantees for five years. The high-speed bill and rider could well be passed in time for the May 1 deadline.

STAGGERS UNLIMITED

The FRA and Amtrak were reported ready last week to announce inauguration of a six-month TurboTrain experiment on the Washington, D.C.-Parkersburg, W. Va. route. A lease agreement was being drawn up to enable United Aircraft to take the backup TurboTrain off the Boston-New York route and place it in the Parkersburg service. FRA engineers and Amtrak operating officers were said to be pleased with results of a speed test over the route Jan. 8-9. The route itself—uphill and through winding mountain passes—is one of the stiffest in the country. C&O/B&O personnel aboard the test run were said to visibly relax as the TurboTrain maintained, at times, the maximum speed for their track, 75 mph; and when a 2.6% grade was successfully climbed. The TurboTrain will, of course, stop at Keyser, W. Va., hometown of House Interstate and Foreign Commerce Committee Chairman Harley O. Staggers.

Circle 30 on coupon page 83 ►



Servo is the world's leading producer of electronic hot box detector systems.

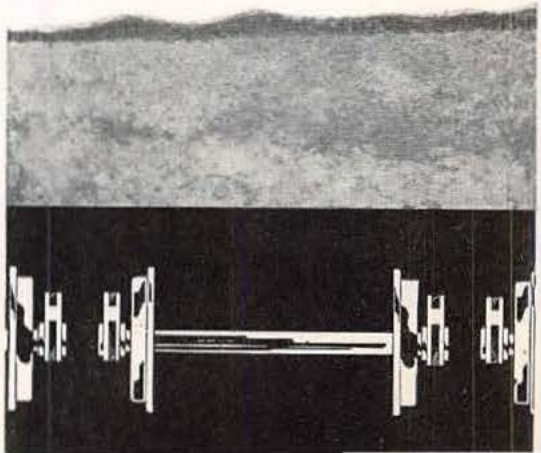
We're not experts in every phase of railroad safety — but as the industry's pioneer designer and producer of electronic hot box detection systems, we can claim a high level of successful experience in working on the problems of bearing failures, axle burn-offs and derailments associated with undetected hot boxes.

Since 1957, more than 1,600 SERVOSAFE Hot Box Detective Systems have been put into service by 54 of the world's major railroads, and have compiled an unequaled record of safety improvement, more efficient preventive maintenance procedures and cost reduction.

Hot box detectors available from Servo offer the widest flexibility in choice of system configuration, features and functional options, including: rail-mounted or ballast-mounted scanner; a complete selection of ancillary and test equipment; solid-state electronic signal processing. Several modes of data read-out are also available — automatic digital read-out at trackside or remote location; pen-paper recorder chart for visual interpretation; FM carrier data transmission over unlimited distances.

With our broad range of products and world-traveling network of field engineers, we can readily "customize" the design, manufacture, installation and operation of a SERVOSAFE system to best meet the particular requirements of your railway.

You are invited to contact us for complete descriptive literature, or to arrange a field engineering site survey and application review — without obligation, of course.



Hot box hide-n-seek. A dangerous game.

Hot box hide-n-seek is an old game — as old as railroading itself. And the villain in the game is the overheated journal that you can't find until it's too late — that's when it worsens into a really dangerous axle burn-off and costly derailment!

The safe way to beat the hot box at its own game is with a SERVOLARM® Model 8000 Trackside Hot Box Visual Display System. Designed to operate with any SERVOSAFE® Hot Box Detective™ System, the SERVOLARM visually signals the presence of a hot journal box and also pinpoints its location. SERVOLARM helps to eliminate train stops and crew delays. It simplifies and speeds up the entire hot box location procedure by directly notifying the crew via a trackside bi-directional display board — a digital readout shows the axle count location of the hot box. If there are no hot boxes, the display board reads "000."

SERVOLARM can be quickly and easily installed with a minimum of construction equipment and labor, while eliminating long distance wiring and extensive communication equipment costs.

If you're looking for an easier and safer way to win the game of hot box hide-n-seek most of the time, take a look at SERVOLARM.

Train crew on the Cincinnati-Atlanta line of the Louisville & Nashville Railroad gets the "OK" signal from a SERVOLARM Trackside Hot Box Visual Display.

servo

MEMBER RPI

SERVO CORPORATION OF AMERICA
Hicksville, N.Y. 11802 Tel. 516-938-9700
European Office: Lausanne, Switzerland

1946-1971

25

25 YEARS OF SERVING SAFETY THROUGH SCIENCE

By all means,
SOUTHERN PACIFIC
SOUTHERN PACIFIC
TRUCK SERVICE
N PACIFIC
TRUCK SERVICE
27,000 miles of highway routes in 10 states are served by fast Southern Pacific trucking services through 106 modern terminals.
SOUTHERN PACIFIC
Southern Pacific Marine Transport handles containerized freight under one bill of lading as a single carrier between domestic and international points.

ship Southern Pacific.

Southern Pacific serves domestic and international shippers with the most diversified array of transportation services ever available from one company—trains, trucks, intermodal marine transport, air freight, over 2,700 miles of pipeline, and communication and computer expertise, too. Backing up this wide range of services is America's most modern fleet of equipment, with facilities strategically located to provide shippers efficient, fast and economical transportation service.

Southern Pacific

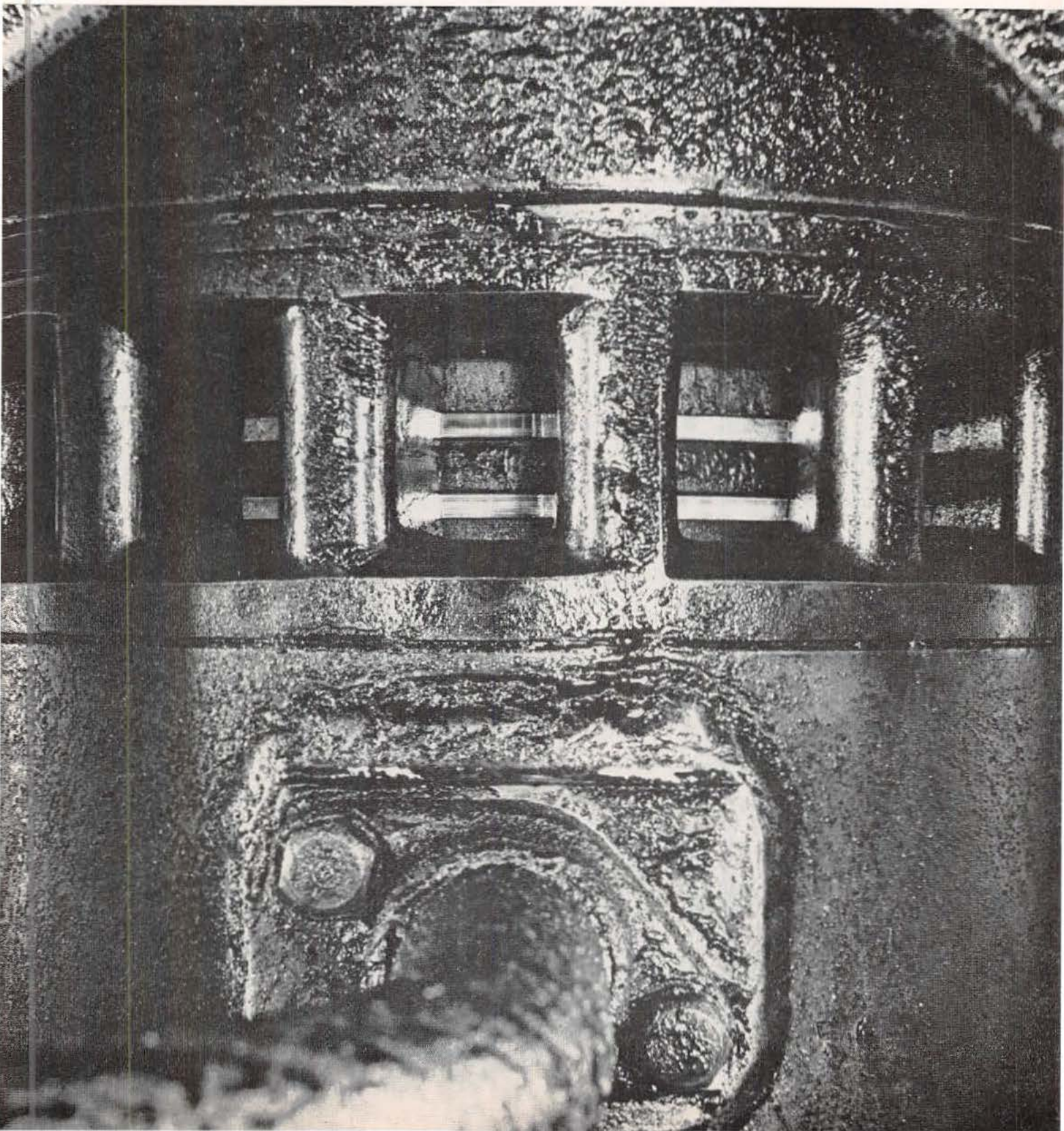
—the transportation company that does things first.

14,000 miles of railroad, a fleet of 90,000 freight cars, 2,200 modern diesel locomotives, and computerized classification yards provide America's most efficient rail freight service.

Southern Pacific Air Freight provides an expedited domestic and international forwarding service with a one-cost airbill. SPAF is expanding in the West now.

Circle 31 on coupon page 83

Shell Tornus® Oil has railroad–for over a



been working on the half billion miles.

High performance TORNUS Oil has been helping over 2100 EMD diesels run at top efficiency for 18 leading railroads. Total track miles to date: over 650,000,000. Good idea to get acquainted with this oil.

There are many convincing reasons why Shell TORNUS Oil is preferred by leading railroads. One big reason is better performance for EMD's, resulting in long-term cost savings over conventional oils. Just look what this oil does:

It helps keep engines clean—TORNUS Oil contains dispersant additives that keep carbon and soot particles in suspension. The oil gets dirty instead of the engine.

Result: lower engine operating temperatures, freedom from ring-sticking, oil ring plugging and deposits in the intake air ports that can steal power.

It provides anti-wear protection—This oil maintains an alkaline reserve that helps protect engine parts against corrosive wear.

It helps prevent engine damage from water leaks—The additives in TORNUS Oil help it "swallow" water. There's less danger to engines when minor water leaks occur.

It provides safe lubrication over extended service intervals—With TORNUS Oil, periods between cleaning of oil coolers are longer than with conventional oils. Oil filter life is two to three times better. Oil quality between changes can be maintained and drain life extended.

It helps reduce the frequency of engine shutdowns—TORNUS Oil stretches the time between costly shutdowns caused by plugged filters and hot oil alarms. It helps keep oil coolers clean and keeps trouble-causing particles in suspension.

Efficiency plus savings

Add up these advantages and you see that TORNUS Oil not only helps EMD's maintain efficient operation; it can offer users of conventional oils long-term savings as well. Savings through less frequent replacement of moving parts such as pistons and bearings. Savings in engine clean-up time at overhaul.

Shell specialists made TORNUS Oil the hard-working, stable oil it is today. And they're not sitting on their hands. They're watching the horsepower curves. They're thinking about the next generation of Shell lubricants for high-output engines. Keep an eye on Shell.

Is there an idea here for you?

Your Shell Representative is the man to see for full details about TORNUS Oil. Call him soon at the Shell office nearest you. Shell Commercial Marketing, One Shell Plaza, Houston, Texas 77002.

Stamford, Conn., (203) 327-3600
Baltimore, Md., (301) 821-5905
Chicago, Ill., (312) 341-3275
New Orleans, La., (504) 521-2684
Menlo Park, Calif., (415) 325-0721

Shell Tornus® Oil

SHELL

◀ AFTER 94,360 MILES, the No. 3 cylinder of this EMD-SD-40 on TORNUS Oil is exceptionally clean. No power-robbing deposits on air intake ports. Rings are in excellent shape. Original hone marks are still clearly visible on the liner. EMD-SD-45 diesels are typical examples of the more than 2100 EMD engines throughout the country using TORNUS Oil.

Circle 32 on coupon page 83

1971 REVIEW

It was not a year of solutions. But

When the patient is sick enough, any small sign of improvement is encouraging. In 1971, railroads—and most of transportation, for that matter—were still ailing. But there **was** that small but encouraging sign of improvement.

Probably the most optimistic individual to be found anywhere in transportation was DOT Secretary John A. Volpe. DOT, he believes, has reached a turning point in its attempt to "establish a foundation for an efficient and balanced transportation system." Further, he declares, DOT is on its way to "curing the ills which have afflicted transportation in the United States."

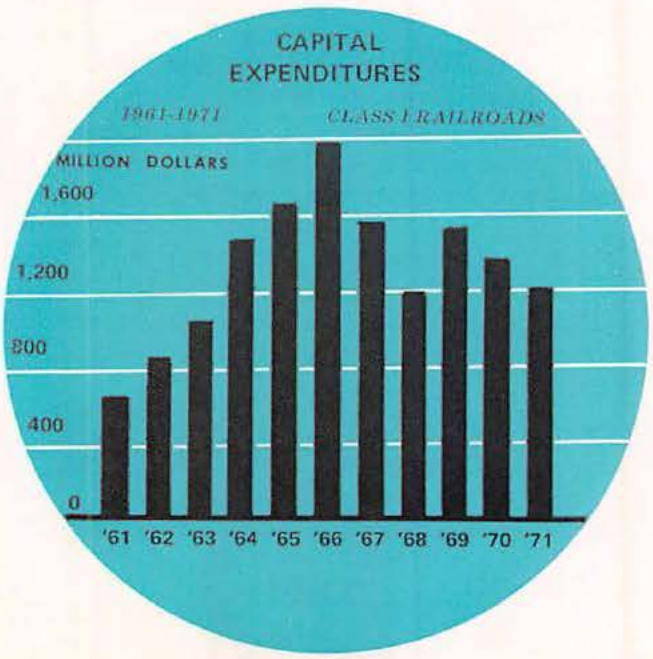
Not many people are that cheerful in outlook—generally, or with specific regard to what DOT has done and is doing. But there are sound reasons to look back on 1971 with a certain satisfaction—just as there are sound reasons to forecast even better things-to-come.

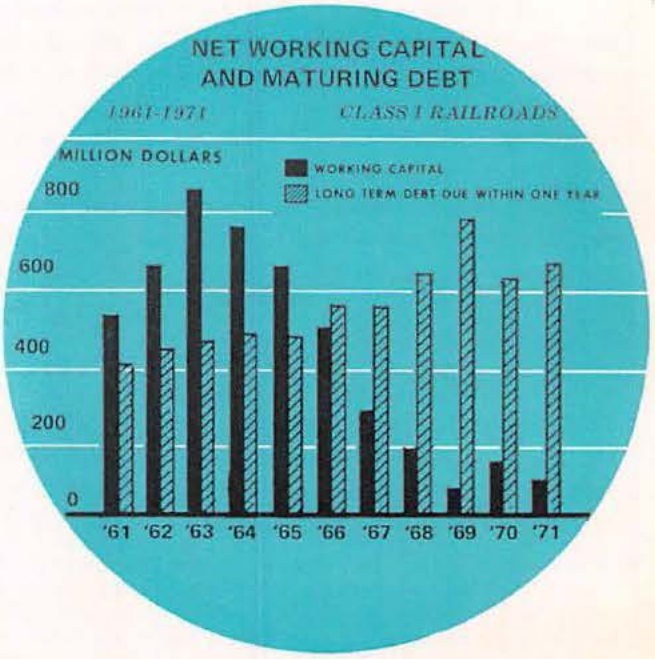
On an over-all basis, railroads, motor carriers and water carriers are hailing their own ability to get together on legislative goals, as reflected in the Hartke-Adams Surface Transportation Act of 1971. DOT itself, late in the year, came up with a comprehensive series of transportation-reform proposals. Regardless of what happens as between the STA and DOT plans, some legislative change seems almost certain. And it started in 1971.

Railroads could also point to the '71 reinstatement of the investment tax credit . . . to the startup of Amtrak and its effect on rail passenger-service losses . . . to a first-step modernization of work-rules in the operating crafts . . . to another year of high-level spending for equipment and property improvements . . . to freight-service improvements made by virtually every major road . . . and to modest improvement in the status of Penn Central, for a year and a half the most obvious manifestation of railroad problems.

Actually, 1971's financial story was more of a puzzle than anything else. With recent rate increases having their full effect, revenues climbed through most of the year—despite a soft economy and a decline in traffic. But there were dock strikes and a coal strike. There was a nationwide rail strike, and then a series of selective strikes that came close to shutting down half the industry. There were the 1971 writeoffs of railroads' Amtrak entry fees. And the railroads, which might have had a rebound year from the disaster of 1970, wound up limping again.

Without much doubt, the big story of transportation last year was the governmental recognition—in Congress and in the Administration—of the need for action. Ranking second, on a "pick-'em" basis, would be the industry's in-





a start was made.

ternal improvements and its progress toward work-rules reform. The real action will come in 1972. But the start has been made.

Financial results

At the end of 1970, AAR President Thomas M. Goodfellow observed that "Certainly 1970 wasn't a good year for the railroads." At the end of 1971, AAR President Stephen Ailes observed that "While 1971 obviously was another disappointing year for the industry financially, there were several heartening developments."

Both Goodfellow and Ailes were right, each for his own time, and for his own frame of reference. The facts are that railroad financial results for 1971 were only a bit better than they were for 1970—and that, only up to a point. In 1970, net railway operating income was $486 million, rate-of-return was 1.73% and ordinary income was $227 million. Final figures are not in on 1971, but for the 12 months ended Sept. 30, 1971, net railway operating income was $716 million, rate-of-return was 2.53% and ordinary income was $391 million. Full-year results, however, will have to take into account the impact of East and Gulf Coast dock strikes and a coal strike—and it takes only a look at the carloadings and ton-miles charts for October 1971 and part of November to measure the effects of these walkouts.

With that caveat, 1971 results (through September) were still mixed—both promising and discouraging in comparison with the preceding decade's results. NROI, for instance, was higher than it was in any year since 1966. But to get a lower figure on the bottom line, ordinary income, you have to go back to 1961's $382 million—excepting, of course, the $227-million disaster of 1970.

The revenue picture in '71 was not bad. With the full effect of recent rate increases, railroads took in more money on less business. Revenues totaled more than $12.6 billion, up from a little less than $12 billion in '70. Operating expenses went up from $9.6 billion in 1970 to more than $9.9 billion last year. And the ratio of expenses, rents and taxes to revenues declined only slightly, from 95.2% to 93.2%.

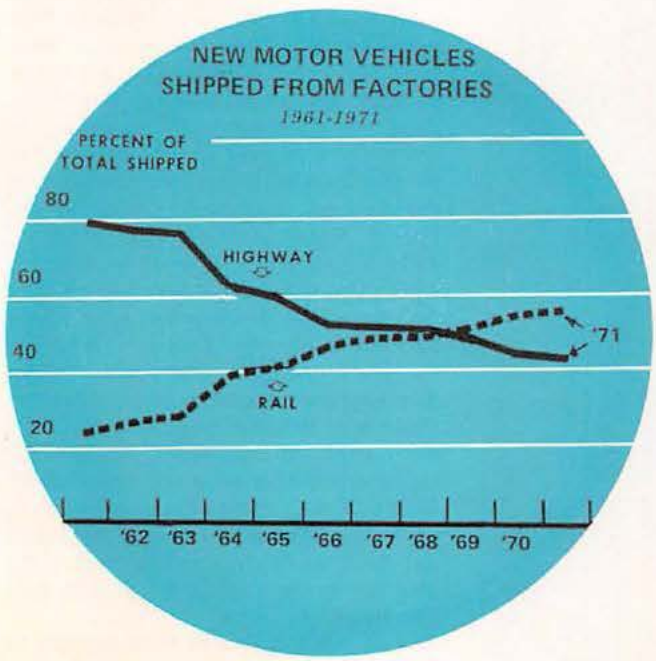
During 1971, not all categories of expense increased. Through Sept. 30, the industry showed a jump in expenses in maintenance-of-way and maintenance-of-equipment. But there was only a slight increase in transportation expenses. That category known as "traffic, general and other" showed a decline.

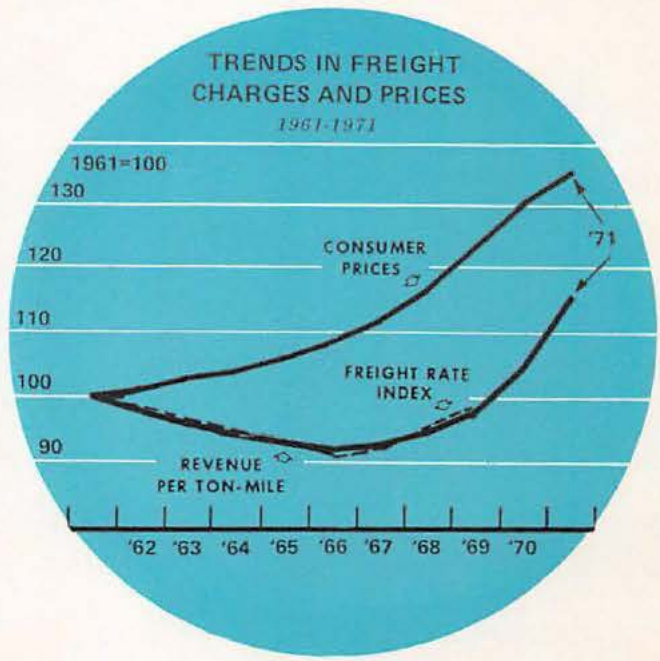
On the revenue side, there were predictable decreases in passenger, mail and express. Freight revenues, reflecting 1967-71 rate increases, went from $10.9 billion to more than $11.6 billion.

Taxes showed an increase in every major category—including payroll and Federal income tax. And the big jump came in employee compensation. In 1970, the total stood at $5.7 billion, adjusted for retroactive increases. That was up from $5.3 billion in 1969. And for 1971, the compensation total is now estimated at more than $6 billion. Average annual earnings per employee, which topped $10,000 for the first time in 1970, are now above $11,100.

At the close of 1971, railroads were under Phase 2 of President Nixon's economic program—with a rate surcharge proposed and approved, with a rate increase under consideration by regional rate groups, and with stiff wage increases coming due under contract April 1 and Oct. 1.

For a variety of reasons, Class I rail-





Rate of Return and Net Income—1961-1971

Year	Net railway operating income (millions)	Rate of return on investment after depreciation	Net income after fixed charges* (millions)
1961	$ 538	1.97%	$382
1962	726	2.74	571
1963	806	3.12	652
1964	818	3.16	698
1965	962	3.69	815
1966	1,046	3.90	904
1967	676	2.46	554
1968	678	2.44	569
1969	655	2.36	514
1970	486	1.73	227
12 mos. to 9/30/71	716	2.53	391

* Ordinary income before extraordinary and prior period charges and credits.
Operations of the National Railroad Passenger Corporation (AMTRAK) are not included.

Condensed Income Account—1966, 1970 and 1971

	1966 (millions)	1970 (millions)	12 mos. to 9/30/71 (millions)
Total operating revenues	$10,655	$11,992	$12,649
Total operating expenses	8,118	9,660	9,963
Taxes	968	1,069	1,142
Rents (net debit)	523	777	828
Total expenses, rents and taxes, Excl. Fed. income taxes	9,422	11,417	11,792
Ratio to revenues	88.4%	95.2%	93.2%
Net railway operating income	$ 1,046	$ 486	$ 716
Net income (ordinary)	904	227	391

Operating Revenues—1966, 1970 and 1971

	1966 (millions)	1970 (millions)	12 mos. to 9/30/71 (millions)
Freight	$ 9,281	$10,922	$11,684
Passenger	544	420	318
Mail	304	161	138
Express	67	22	13
All other	459	466	495
Total	10,655	11,992	12,649

Operating Expenses—1966, 1970 and 1971

	1966 (millions)	1970 (millions)	12 mos. to 9/30/71 (millions)
Maintenance of way	$1,304	$1,613	$1,759
Maintenance of equipment	1,844	2,165	2,321
Transportation	4,139	4,873	4,880
Traffic, general and other	831	1,009	1,004
Total	8,118	9,660	9,963

Freight and Passenger Traffic—1961-1971

Year	Revenue carloadings (thousands)	Piggyback carloadings (thousands)	Revenue ton-miles (millions)	Revenue passenger-miles (millions)
1961	28,590	591	563,361	20,283
1962	28,722	706	592,862	19,902
1963	28,871	797	621,737	18,494
1964	29,027	891	658,639	18,245
1965	29,248	1,034	697,878	17,378
1966	29,623	1,163	738,395	17,085
1967	28,084	1,207	719,498	15,193
1968	28,253	1,337	744,023	13,110
1969	28,238	1,344	767,841	12,159
1970	27,160	1,257	764,809	10,770
1971	25,261	1,197	e738,000	n. a.

e—Estimated.
Note: Piggyback carloadings shown above do not include mail and express, of which 157,257 piggyback carloadings were handled in 1971.

Note: Statistics shown above and elsewhere in this article are for Class I line-haul railroads unless otherwise indicated.

road capital spending took another dip in 1971, from $1,351,000,0000 in 1970 to an estimated $1.2 billion. The breakdown: $993 million for motive power and freight cars, $358 million for improvements to fixed plant. Locomotive orders were estimated at 1,100 units, freight-car orders at something over 50,000 units.

Throughout the year, spending forecasts fell, rose and fell again—following, in part, vibrations emanating from Washington. Early on, a survey by the Commerce Department's Office of Business Economics predicted a drop of almost 15% from 1970 levels. But by March, a second look by Commerce indicated not a decrease but an increase of about 2.5%

Coincidentally, at about the time Commerce was revising its estimates upward, Sen. Vance Hartke (chairman of the Senate Commerce Committee on surface transportation) was introducing a bill to reinstate the investment tax credit at a 10% rate. Also during the first half of the year, the Treasury Department announced and then put into effect liberalized depreciation rules. Railroads had been able to take advantage of rapid amortization on rolling stock at a faster rate as provided by the Tax Reform Act of 1970. But Treasury's new plan did offer something of possible benefit, in its abolition of the complex reserve ratio test for companies choosing to depreciate new equipment on a guideline life.

For most of 1971, however, the tax credit was front-and-center in railroad and supply-industry thinking—not only for benefits which reinstatement could bring but also for the psychological value of a government boost for business expansion. It became part of the President's economic program, announced in August. Compromises followed (the Administration had proposed a first-year 10% credit, followed by a cutback to 5%), and what emerged from Congress was a 7% tax credit provision. As written by Congress and signed into law by the President, the credit applies to the cost of equipment (made in the United States) ordered after April 1, 1971, or delivered on or after Aug. 15. 1971. The bill also put into law most of the liberalized depreciation rules made effective earlier by Treasury. And for the first time, track was made eligible. This had been a sticking point when the credit was in effect beginning in 1962. The 1971 act, however, makes the credit retroactive on track replacement to Dec. 31, 1961—thus helping to resolve pending disputes with the Internal Revenue Service and providing future tax savings estimated at $70 million annually.

And, while railroads were fighting to maintain improvement spending at a

Carloadings by Commodities—1971 vs. 1970

	1971	1970		Incr. or Decr. 1971 vs. 1970 Cars	%
Grain	1,293,531	1,467,937	D	174,406	11.9
Other farm products	704,823	827,723	D	122,900	14.8
Metallic ores	1,739,741	1,952,676	D	212,935	10.9
Coal	4,495,048	5,163,384	D	668,336	12.9
Crushed stone, gravel and sand	1,371,342	1,457,355	D	86,013	5.9
Nonmetallic minerals	481,323	506,866	D	25,543	5.0
Grain mill products	948,972	993,370	D	44,398	4.5
Food and kindred products	1,245,334	1,301,146	D	55,812	4.3
Primary forest products	1,218,292	1,297,428	D	79,136	6.1
Lumber and wood products except furniture	775,783	741,911	I	33,872	4.6
Pulp, paper and allied products	1,169,923	1,195,632	D	25,709	2.2
Chemicals and allied products	1,362,837	1,415,296	D	52,459	3.7
Petroleum products	485,173	536,327	D	51,154	9.5
Stone, clay and glass products	954,745	1,002,673	D	47,928	4.8
Coke	373,401	433,171	D	59,770	13.8
Metals and products	1,193,080	1,360,968	D	167,888	12.3
Motor vehicles and equipment	1,169,779	960,451	I	209,328	21.8
Waste and scrap materials	709,841	741,956	D	32,115	4.3
Forwarder and shipper association traffic	306,289	360,862	D	54,573	15.1
All other carloads	3,233,311	3,396,361	D	163,050	4.8
LCL traffic	28,290	46,754	D	18,464	39.5
Total cars loaded	25,260,858	27,160,247	D	1,899,389	7.0

Prices, Freight Rates and Revenue Averages—1961-1971

Year	Consumer price index (1967 = 100)	ICC freight rate index (1950 = 100)	Revenue per ton-mile (cents)	Revenue per passenger-mile (cents)
1961	89.6	114	1.374	3.079
1962	90.6	112	1.348	3.110
1963	91.7	109	1.310	3.179
1964	92.9	107	1.284	3.168
1965	94.5	105	1.266	3.182
1966	97.2	104	1.257	3.182
1967	100.0	105	1.269	3.195
1968	104.2	109p	1.310	3.389
1969	109.8	112e	1.347	3.608
1970	116.3	n.a.	1.428	3.904
1971	121.2e	n.a.	1.580e	n.a.

p Preliminary. e Estimated. n.a. Not available.

reasonable level in '71, there was a somewhat discouraging note on government spending. By the AAR's estimate, spending for transportation facilities at all levels of government would approximate $25 billion in the year. Of this record-high total, railroad projects were in line for less than one-fifth of 1%—made up mostly of a one-shot $40-million appropriation for Amtrak and about $6.5 million for rail-related projects under high-speed ground transportation research.

Traffic trends

To an increasing extent, freight shippers in 1971 got along without railroads—and that may be the biggest long-range worry the industry has.

In '71, both carloadings and ton-miles dipped sharply. Loadings were down by about 7%, ton-miles dipped by 3.5%. Strikes could be blamed for part of the decline—rail strikes by the Brotherhood of Railroad Signalmen and the United Transportation Union, and strikes which hit the coal industry and the West, East and Gulf Coast docks. Carloadings of coal alone were down by almost 13%, with roads such as Norfolk & Western and Chesapeake & Ohio/Baltimore & Ohio hard-hit. But coal was not the only problem: Among the 21 carloading categories measured in AAR figures, only two were up—motor vehicles and equipment, and lumber and wood products. Declines of more than 10% were reported in grain, other farm products, metallic ores, coke, metals and metal products, and forwarder and shipper association traffic. Over-all, carloadings dropped to 25.2 million from 27.1 million in 1970.

In the face of this, railroads were taking action—in operations and in the marketing/sales area. On the operating side, there was an increase in the number of runthrough trains. Several roads, notably Burlington Northern and Southern Pacific, were moving ahead with new yard construction projects. Railroads generally were waiting for final approval of labor contracts which would permit operating speedups (and Chicago & North Western, the only road able to implement work-rules changes during 1971, confirmed that service improvements would follow rules changes).

On the marketing side, most roads were trying to make "marketing" more than a name. Sales efforts were restructured by several roads, and sales training got new emphasis. The commodity approach to marketing got new attention, with roads such as BN trying to bring all facets of the sales/marketing approach together for the benefit of both customer and carrier.

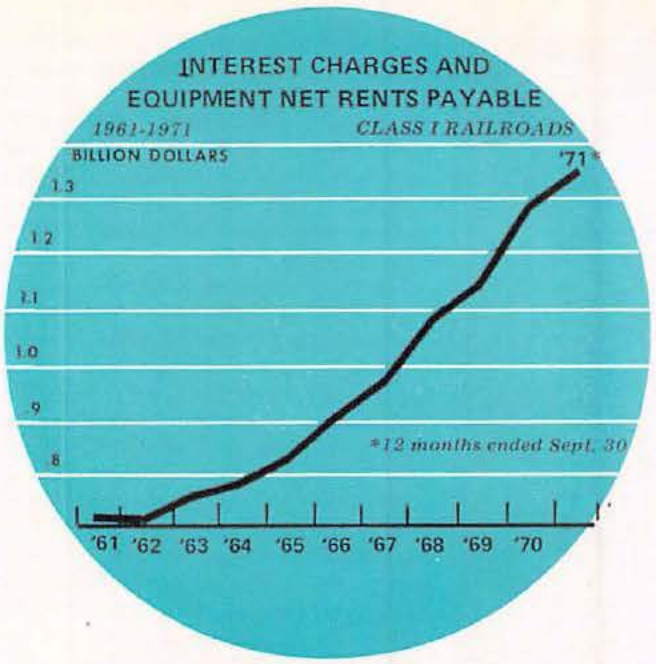
In theory at least, one of the most important industry moves of 1971 may have been creation of a task force to design a national car-control and information system. Railroads have, at an industry level, TRAIN, the car-location reporting system. There is also automatic car identification, which came out of 1971 with close to 100% labeling (after a number of deadline extensions), but with nothing like the scanner coverage which will be required to make aci a broad-gauge, working system. The task force is to look into TRAIN and aci. Its goals are the design of a system to increase equipment utilization, reduce car shortages, cut capital requirements for equipment, cut administrative costs, make customers happier and make railroads more profitable.

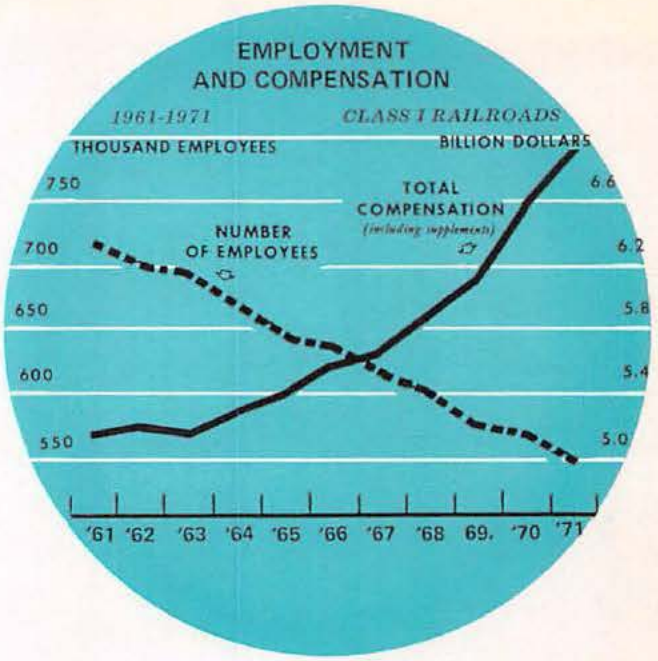
While the AAR study is going on, however, most roads are well into their own programs of management-information improvement—and these programs, almost without exception, are aimed at giving management the kind of data that will improve decision-making capability in the service-improvement area.

Freight rates

In some ways, 1970 was one long rate case. By contrast, 1971 was a more simple year—with railroad action, for the most part, limited to filing a proposal for a 2.5% surcharge on freight service bills to become effective Jan. 1, 1972. Railroads took this route as a way of getting a quick increase in revenues—needed, they said, to partially offset cost increases of about $1.16 billion which had hit the industry since the record was made in the previous rate case. The surcharge, it was estimated, would produce approximately $250 million in added revenues—and the ICC was told that a later proposal would be made "for the authority necessary to file a general increase in freight rates and charges on a selective basis."

At year-end, the Commission had approved the surcharge, but with a Feb.





5, 1972, effective date on at least 30 days' notice. The Commission also said it would accept protests until Jan. 20 and then consider whether to suspend the surcharge. Railroad traffic officers, meanwhile, were meeting to discuss the next moves in the rate situation. But '71 slipped into '72 with no decision announced.

As 1971 began, there were more than a few holdover questions before the ICC. Still under investigation were 8% increases which had been granted eastern and western roads and a 6% nationwide increase, and the Commission had denied a request by southern lines for increases ranging up to 15% to take the place of a 6% interim boost scheduled to expire at the end of February. Closing briefs in the two principal cases (Ex Parte 265 and 267) were filed in January at about the same time that the ICC set a new deadline for statements in Ex Parte 271, a proceeding begun by the Commission as an investigation of bases for measuring rate-of-return.

Then in March, the ICC made permanent increases effective—including the 6% nationwide increase and increases averaging 11.8% for eastern and western roads and 6% for southern roads—thus cleaning up the 265 and 267 cases. The ruling reflected differences of opinion within the Commission—with four of the 11 commissioners dissenting and one not participating. In its order, the Commission also directed railroads to make quarterly reports on "remedies" which had been applied to correct alleged service deficiencies.

The next major move on the pricing front came not from the railroads nor from the ICC but from the President—with his Aug. 15 announcement of a 90-day wage/price freeze. The Commission immediately put a moratorium on all proposals for increases in rates and charges—though at the same time it issued a special permission order permitting short-notice postponement of certain pending proposals. This action, the Commission indicated, was being taken because some proposals for increases also involved decreases—and the ICC believed it unreasonable to prevent a carrier from withdrawing a proposed decrease when it was barred from making an offsetting increase.

Clarification of the rate situation did not come until November, with rules issued by the Price Commission under the Economic Stabilization Act of 1970 and guidelines then formulated by the ICC. Three categories of carriers were established: (1) Those with revenues of $100 million or more, that must report all proposed increases to the Price Commission when they are filed with the ICC; (2) those with revenues of $50 million to $100 million, that do not have to report to the Price Commission so long as proposals are within Cost of Living Council guidelines; and (3) those with revenues of under $50 million, that are subject to IRS examination for compliance but do not have to pre-notify. Carriers proposing increases of 2% or more, the ICC said, must provide supporting evidence as justification.

Meantime, the Commission was moving ahead with two investigations, one involving the over-all freight-rate structure (Ex Parte 270) and the other looking into rate-of-return (Ex parte 271). In the first case, the ICC began a probe of rail freight service (270, Sub No. 2) with the observation that while improved terminal operations had been noted, "there is little showing of the relationship of such measures to improvements in speed, reliability of service and the elimination of such things as delays and erratic deliveries." The Commission also cited a lack of feedback from the customers' side and set up forms and procedures for reporting and correcting deficiencies. In 271, the ICC broadened the scope of its study to cover determination of what constitutes a fair rate-of-return. Statements were called for by Jan. 31, 1972, with replies due by March 1.

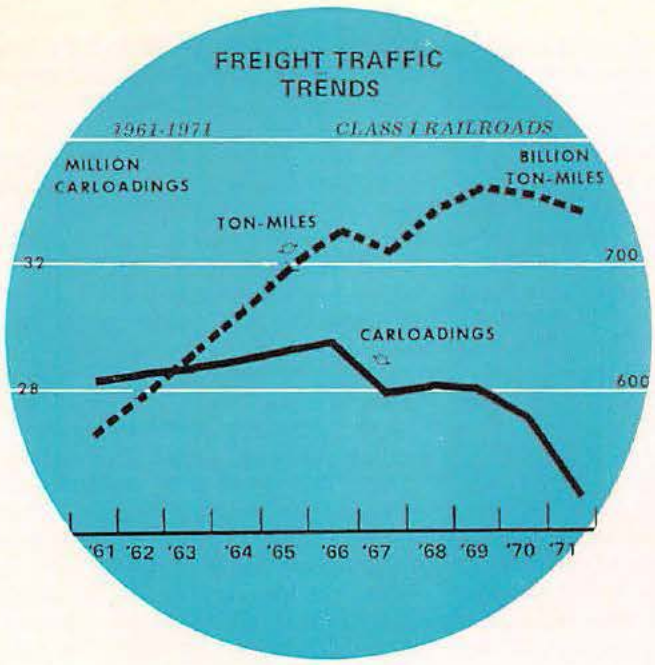
Management/labor

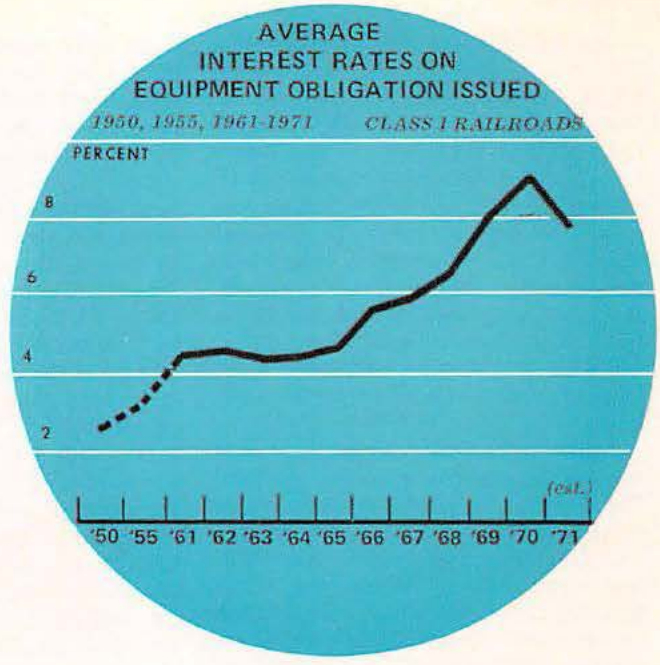
Railroads and rail labor organizations rewrote the book in 1971—and an apt title might be "War and Peace."

Seldom has there been such a year of commingling of conflict and accommodation. Seldom has there been such a year of bitter disagreement and genuine progress.

Going into 1972, the railroads lacked long-term agreements with just two unions, the Firemen & Oilers and the Sheet Metal Workers. (Agreement had been reached with the United Transportation Union, but UTU was waiting for clarification from the Pay Board before making it official.)

During 1971, railroads agreed to the biggest-ever pattern package of wage increases, generally working out to 42% (compounded) over a 42-month period stretching forward to mid-1973. Railroads also won a significant package of





work-rules reforms in contracts negotiated with both the Brotherhood of Locomotive Engineers and UTU. And on an individual basis, several roads seemed to be going even farther, laying the groundwork for better relationships and more productive operating practices.

Progress, however, came at a high price—in wage increases agreed-to and in losses caused by strikes and strike threats.

The year began with nothing settled and with the railroads and four unions—UTU, the Brotherhood of Railway and Airline Clerks, the Brotherhood of Maintenance of Way Employes and the Hotel and Restaurant Employees—working on an emergency board report which had been issued in November 1970. BRAC moved first, calling a March 1 strike. Before the deadline, however, settlements were reached with BRAC, BMWE and HRE—leaving only UTU from the group of four. Months would pass before the UTU affair was settled.

Rather quickly, the courts became the railroad/UTU battleground. Warned that UTU planned to strike selectively (Burlington Northern and Seaboard Coast Line), the railroads went to U.S. District Court for a preliminary injunction barring selective walkouts. The railroads got the requested order, but the union appealed and won reversal of the lower-court order. The railroads then went to the U.S. Supreme Court—and the high court, without comment and with only one justice dissenting, allowed the appeals-court ruling to stand.

In the meantime, the industry had also been forced to fight on a different front. In March, a dispute with the Brotherhood of Railroad Signalmen went to an emergency board, in April the board's report came out and in May the union struck. The BRS walkout, on a nationwide basis, lasted two days. It cost the railroads an estimated $10.5 million. Congress ended it, ordering a return to work and granting a 13.5% wage increase retroactive to Jan. 1, 1970—the same wage action Congress had taken in behalf of UTU, BRAC, BMWE and HRE in November 1970.

During this same period, ironically, railroads were also reaching agreements on peaceful bases. In April and May, there were settlements with unions representing dispatchers and yardmasters and with the BLE. And the BLE pact represented the first major example of negotiated work-rules reform since rules-change became an issue in the late-1950s.

Then, in July, the railroads and UTU hit the crisis point. UTU set July 16 for walkouts against Union Pacific, Southern and Chicago & North Western. The railroads countered not with a lockout as some had expected but with notice that they would implement their original proposed work-rule changes. With this, Chicago & North Western withdrew from national-handling and, after another series of court proceedings, reached an individual settlement with UTU on wages and rules.

Meanwhile, UTU—keeping in mind a court-suggested two-week strike notice—broadened its strike list even before UP and Southern were hit. Next up were to be Norfolk & Western and Southern Pacific, July 24. Still later, UTU served a July 30 notice on six more roads—Santa Fe, Alton & Southern, Houston Belt & Terminal, and three steel roads, Duluth, Missabe & Iron Range; Elgin, Joliet & Eastern and Bessemer & Lake Erie. Finally, UTU said it would hit Rock Island, Milwaukee Road, Katy and Chesapeake & Ohio/Baltimore & Ohio Aug. 6.

Then it ended, 18 days after the start of strikes against UP and Southern and after eight more roads had been shut down. Only the final group on the union's strike-list was spared. Settlement came after direct talks involving UTU's president and the presidents of three roads—SP, Southern and Penn Central. Agreement on wages followed the 42%-42-month pattern; agreement on rules was markedly similar to the earlier agreement between UTU and C&NW, and to the national agreement with BLE.

Nothing is simple in rail management/labor matters, however—and as UTU was in the midst of its contract-ratification procedure (and in the process of holding its quadrennial convention), President Nixon announced Phase 1 of the wage/price freeze. UTU put a clamp on everything and, at year-end, had not even confirmed that the pact had been ratified. The sticking point was said to be the future increases, pegged for 1972.

The last few months of 1971 were, by comparison with spring and summer, calm. Agreements were worked out with BRS and with four shopcraft unions. Negotiations continued on union demands for improved health/welfare benefits.

Two other areas—personnel and law

—deserve comment. On the personnel side, the biggest of the rail unions, BRAC, reelected its president, C. L. Dennis. The biggest of the operating unions, UTU, got a new one as Charles Luna reached retirement age and Al H. Chesser, national legislative director, was named to succeed him. The National Railway Labor Conference, meanwhile, got a new chairman, William H. Dempsey, a lawyer who has handled a number of major rail labor cases. Effective Jan. 1, 1972, he succeeded J. P. Hiltz, Jr., who retired at his own request.

Legal aspects of management/labor relations changed in a couple of ways. The Supreme Court upheld the right to strike selectively, with certain conditions. The Supreme Court also ruled that courts can enforce the mandate of the Railway Labor Act which says that the parties must "exert every reasonable effort to make and maintain agreements." Finally, the Railway Labor Act itself survived another year without change. Early in the year, President Nixon resubmitted to Congress his proposals for heading off transportation strikes, and the railroads put in their own plan for change. Later, the railroad and airline industries submitted a joint proposal. All of these proposals involved an arsenal-of-weapons approach to strike-prevention. Congress failed to act on any of them. And on the state level, there was only one development of note: New York repealed its crew-consist law, while some progress toward repeal was made in Wisconsin, Ohio and Indiana.

Rail merger activity

If it weren't for the Rock Island case, the ICC would have wound up 1971 with a clean slate and an empty file, where rail consolidations are concerned. The one exception, of course, is the big one—because the Rock Island affair is the most complex case ever to come before the Commission. But the fact remains that RI is the last case pending from the merger movement which started in 1955, some 40 consolidations ago.

Only a couple of mergers were consummated during 1971. Monon was merged into Louisville & Nashville, and there were structural rearrangements of a number of small components of the Southern system. One major case—Chesapeake & Ohio/Norfolk & Western—was dismissed. An ICC examiner had recommended approval, but the two roads later decided to call things off, citing "drastic changes" in the eastern-railroad situation in the six years since the proposal had been filed. A second major case—Illinois Central/Gulf, Mobile & Ohio—got final ICC approval in the last week of 1971, a year and a half after it had won the OK of an examiner.

As 1971 ended, there was no indication as to when final decision would be made in the Rock Island case, which has been before the Commission since mid-1963. Thus far, the record adds up to almost 50,000 pages of testimony, some 1,700 exhibits totaling close to 100,000 pages, and almost 5,500 pages of briefs. In mid-1970, an examiner's summary report recommended merger of RI and Union Pacific and rejected control of RI by Chicago & North Western. The first volume of the examiner's report, however, was not filed until Sept. 1, 1971. The year ended with no further action.

Also still pending at the close of '71 was another case involving C&NW—not a merger or a control case in the usual sense, but an application under which a C&NW employees group would buy the rail assets of Northwest Industries, parent of C&NW. In September, an examiner gave conditional approval to the proposal of North Western Employes Transportation Corp., though he thought it "very likely . . . latent with unforeseen imperfections."

No new merger/control applications were filed during 1971, but railroads were not completely inactive in this area. Southern began preliminary talks on the acquisition of Norfolk Southern. Seaboard Coast Line and L&N agreed on a plan for SCL to become the sole stockholder of L&N. And Canadian National put its three U.S. lines, Grand Trunk Western, Central of Vermont and Duluth, Winnipeg & Pacific, under a holding company, Grand Trunk Corp.

As of the end of 1971, the box score on the modern merger movement looked like this: Since January 1955, 59 proposals have been filed (including four major petitions in the Rock Island case); of these, 40 have been approved, six have been denied, six have been

Employees and Their Compensation—1961-1971

Year	Average number of employees	Total payroll (thousands)	Average annual earnings per employee	Average straight-time Hourly rate	Average straight-time Hourly earnings
1961	717,543	$4,623,982	$6,444	$2.69	$2.87
1962	700,146	4,662,065	6,659	2.75	2.95
1963	680,039	4,629,566	6,808	2.78	2.99
1964	665,034	4,697,884	7,064	2.85	3.06
1965	639,961	4,793,066	7,490	3.00	3.22
1966	630,895	4,879,273	7,734	3.10	3.33
1967	610,191	4,933,663	8,085	3.30	3.56
1968	590,536	5,110,636	8,654	3.47	3.74
1969	578,277	5,362,754	9,274	3.70	4.00
1970	566,282	*5,711,280	*10,086	*4.05	*4.35
1971 (est.)	545,000	6,075,000	11,150	4.48	4.80

* Adjusted to include retroactive increases.

Index of Wage Rates and Material Prices—1961-1971

(Average 1967=100)

Year	Wage index	Price Index Fuel	Price Index Other material	Total material	Index of wage rates and prices
1961	81.4	100.4	94.2	95.6	83.9
1962	83.3	99.6	93.6	94.9	85.4
1963	84.2	99.1	93.4	94.6	86.1
1964	86.3	93.3	94.2	94.0	87.7
1965	90.9	95.6	94.9	95.0	91.6
1966	93.9	97.2	96.5	96.6	94.3
1967	100.0	100.0	100.0	100.0	100.0
1968	105.1	103.5	102.6	102.7	104.7
1969	112.2	106.7	105.5	105.8	110.9
1970	122.7*	110.5	109.4	109.7	120.2*
1971 (Prel.)	135.7	114.7	113.5	113.7	130.3

* Wage index for 1970 includes retroactive wage increases paid in 1971.

Inventory of Equipment—1961-1971

December 31	Freight cars*	Passenger cars (incl. Pullman)	Head-end passenger-train cars	Diesel locomotive units	Other locomotive units
1961	1,907,723	15,004	12,345	28,240	614
1962	1,852,992	14,240	11,788	28,170	505
1963	1,817,026	13,732	11,369	27,969	478
1964	1,802,582	12,507	11,154	27,879	433
1965	1,803,227	11,371	10,502	27,433	399
1966	1,834,963	10,665	9,932	27,516	378
1967	1,827,376	9,845	9,147	27,317	353
1968	1,804,712	8,736	6,746	27,045	331
1969	1,795,102	8,280	4,170	26,749	290
1970	1,783,916	7,854	3,065	26,754	271
1971 (est.)	1,771,000	n.a.	n.a.	26,700	270

* All cars, railroad and private.

withdrawn, three have been dismissed, and four—the Rock Island four—are pending.

Passenger services

One way of looking at rail passenger operations in 1971 is to say they were one-third railroad, two-thirds quasi-public—railroad from January through April and Amtrak from May 1 on.

Amtrak's impact was difficult to measure, in a mere eight months. On the positive side, it concentrated on on-time performance. To an extent, it jazzed-up passenger promotion, with new symbols and paint schemes, uniformed customer-service attendants, and an advertising campaign. Since it operated only about half the number of trains the railroads had been required to operate, it could use only the best equipment available. On the negative side, there seemed to be no great rush on the part of the traveling public to return to the rails. And Amtrak seemed to have no better luck than the railroads had had in stemming losses from passenger-train operation. In a sense, Amtrak appeared to be proving what railroad men had been saying all along: Passenger trains are losers.

Meanwhile, another venture in the passenger-train business—Auto-Train Corp.—seemed to have found a winning combination. This private enterprise—offering take-your-car-along luxury service between Washington and central Florida—started up late in the year, to the accompaniment of solid future bookings, laudatory nationwide publicity and a fast climb by its stock.

Amtrak, however, had problems from the start. Late in 1970, DOT had come up with its basic city-pair service system and the ICC had made its recommendations. After a certain amount of juggling, Amtrak—or Railpax, as it was known then—made its route designations in March, with 184 trains linking 21 city pairs.

At that time, one of the incorporators spoke of forecasts which could be made "from any number of angles that might indicate a profit in three years. That's not a forecast I would make, but it is a feasible one. We have no thought at this time of going back to Congress for additional money."

Amtrak quickly came under fire, in Washington and from various labor organizations. And it didn't find unanimous acceptance from the railroads: Eighteen joined, but four—Southern and subsidiary Alabama Great Southern, Rock Island and Rio Grande—stayed out. Two associations of labor unions and the National Association of Railroad Passengers sued to delay the scheduled May 1 startup. Congressional hearings threatened to produce legislation also aimed at delay.

But with the coming of May 1, Amtrak was in business. Trains chosen for operation by Amtrak continued to operate; those not chosen were discontinued. And the roads who opted not to join went ahead with business as usual—knowing they could not abandon their passenger operations before Jan. 1, 1975.

Under provisions of the act creating the National Railroad Passenger Corp., additional trains could be scheduled—if authorities along the route agreed to underwrite two-thirds of the costs involved. Most notable change brought about by this section of the legislation was probably the reinstatement of a New York/Chicago operation via Cleveland—an operation since dropped when the required local contributions were not forthcoming.

With a management that was largely non-railroad, Amtrak forged ahead. It came out with a new timetable in July (with improved connections and more station stops) and another one in November (reinstating a number of famous train names and also making service improvements). Amtrak also made its choice of equipment, buying about 1,200 cars from nine roads at a cost of $16.8 million. And there was talk of Amtrak's acquiring new motive power.

In October, however, Amtrak's financial problems came out into the open. President Roger Lewis went to Capitol Hill for money, warning that without additional funds Amtrak would have to start drawing down on $100 million in loan guarantees provided under the original legislation. Under the Rail Passenger Service Act of 1970, Amtrak had a grant of $40 million, plus "entry" fees from member roads which worked out to about $200 million, plus the $100-million guaranteed-loan provision. But, Lewis said, the $40 million had

Capital Expenditures and Purchases—1961-1971

Year	Gross capital expenditures: Rolling stock (millions)	Other facilities (millions)	Total (millions)	Purchases of fuel, material and supplies (millions)
1961	$ 427	$219	$ 646	$1,262
1962	593	240	833	1,311
1963	785	259	1,044	1,401
1964	1,140	278	1,417	1,476
1965	1,304	327	1,631	1,498
1966	1,554	399	1,953	1,605
1967	1,148	374	1,522	1,591
1968	819	368	1,187	1,534
1969	1,089	421	1,509	1,654
1970	993	358	1,351	n.a.
1971 (est.)	860	340	1,200	n.a.

Note: Capital expenditures of Class I railroads do not include expenditures for railroad equipment made by private car companies and lessors. Purchases do not include materials applied by contractors or which otherwise bypass the material and supplies account.

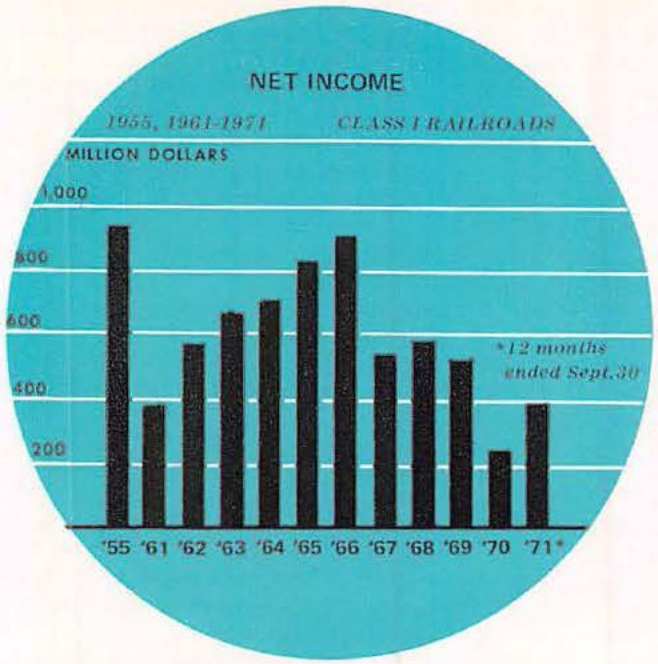
Railway Tax Accruals—1966, 1970 and 1971

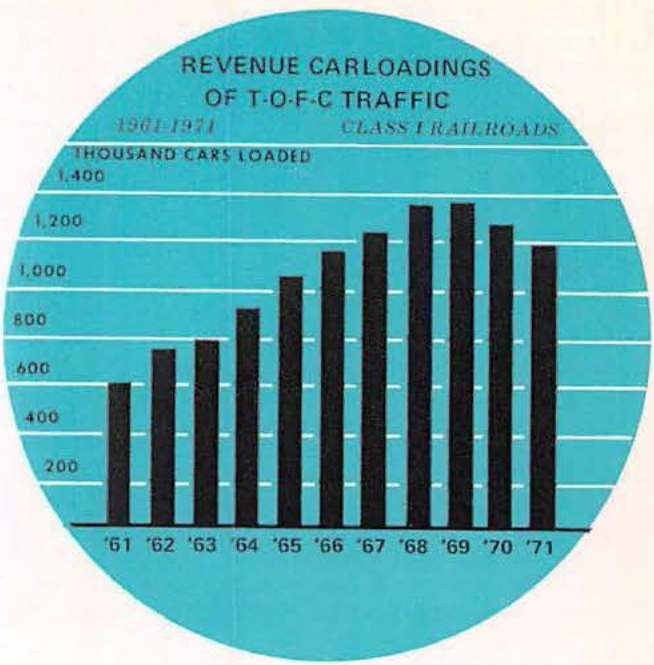
	1966 (millions)	1970 (millions)	12 mos. to 9/30/71 (millions)
Payroll taxes	$439	$ 576	$ 588
Federal income taxes	186	88	140
All other taxes	343	404	413
Total	968	1,068	1,141

New Equipment Installed—1961-1971

Year	Freight-train cars	Passenger-train cars	Diesel-electric units	Other locomotives
1961	34,241	204	242	32
1962	39,822	285	754	28
1963	48,255	143	806	13
1964	83,266	408	1,116	—
1965	89,653	577	1,440	—
1966	106,058	103	1,394	—
1967	100,181	138	1,067	—
1968	68,836	89	1,055	—
1969	75,972	292	1,263	—
1970	75,213	296	1,075	—
1971 (est.)	60,800	n.a.	1,155	—

Note: Units of equipment rebuilt are counted as new. Freight car installation includes cars of all railroads and private car lines. n.a. Not available.





been used up by July—and by November, the income from railroad entry payments would no longer be enough to cover expenses.

Further funding of Amtrak was another problem which Congress let hang over to 1972. Under the original act, Amtrak is to maintain its original level of operations until mid-1973. But without financial aid, there was question as to how that mandate could be carried out. And doubt seemed to be gathering as to whether Amtrak could ever get out of the red.

Predictably, railroads were accused of trying to sabotage Amtrak—or, if not that, of doing little to help Amtrak succeed. The railroads denied the charge. But, as they did, the ICC issued a set of service standards applicable both to Amtrak and non-member operations. The Commission asked for comments by Jan. 6, 1972, on its proposed regulations—which dealt with service performance, reservation procedures and penalties, and operating preference as between freight and passenger trains.

And while Amtrak was having its problems, the one-route Auto-Train was having its profits: Net operating income for Auto-Train's first year was being estimated at more than $4 million.

Rail safety

Under the Federal Railroad Safety Act of 1970, DOT—specifically the Federal Railroad Administration—was placed in the standard-setting business, with an obligation to promulgate standards covering track, equipment and operating practices. This was far from being the Federal government's first involvement with rail safety matters. But it showed signs of being the most far-reaching.

During 1971, standards were issued on track; draft work was under way on equipment standards but the year ended without publication of even a proposed set.

(During '71, too, there was a report which some found mildly ironic: This report, issued on a preliminary basis in May and covering the year 1970, showed a decline of 6.8% in train accidents and a drop of more than 8% in resulting injuries. It was the first time in nine years that improvement could be noted.)

In considering track standards, the AAR urged FRA to use the industry's own set as its standards. When the proposed standards were published, however, railroads found themselves facing a major problem—involving expenditures estimated at more than $2 billion to achieve initial compliance and the investment of additional tens of millions of dollars annually to maintain track at the prescribed standards. FRA listened to the protests, and when actual standards were issued changes were made which resulted in a scaling-down of the spend-to-comply estimates. FRA conceded that some of its proposed standards "were in fact preferred or recommended practices from an economic and engineering standpoint rather than minimum requirements for safety." FRA also extended certain of the compliance deadlines.

Nevertheless, railroads still faced compliance problems—especially in connection with secondary and yard track. And there were fears that, with only a certain number of dollars available, some roads might have to reconsider track-maintenance priorities.

With the mid-1970 collapse of Penn Central, there were those who foresaw a domino effect—with a dozen or more troubled roads following PC into the courts. Most of those other troubled roads continued to have trouble in 1971—but only one, Reading, was forced to take the ultimate step of filing for reorganization under Section 77 of the Federal Bankruptcy Act. Reading became the fifth major railroad to declare bankruptcy in the past several years, joining PC, Jersey Central, Boston & Maine and Lehigh Valley.

Predictably, Penn Central was the focus of attention during '71, as its four trustees and President William H. Moore labored to put the giant back on its feet. At yearend, they could report progress. But serious questions remained as to the ultimate success of their efforts, and PC continued to be Exhibit 1 for those who saw nationalization as a real possibility.

Early-on in '71, PC trustees zeroed in on rate regulation and employment and labor policies as major problem areas. As of March, PC was figuring it had sufficient funds to operate for six or seven months—and that by October or November the trustees should have a better handle on whether the road could be made viable. Four alternatives were suggested, in the event that needed changes—involving Amtrak, rate regulation, abandonment policies, labor policies—were not made: (1) Government contract or subsidy programs to continue uneconomic services regarded as essential; (2) a breakup of PC among connecting lines; (3) government purchase and leaseback of right-of-way; (4) outright nationalization. As

one indication of the problem facing the trustees, PC's 1970 loss was finally estimated at more than $325 million; the first-quarter 1971 loss was pegged at $92.5 million, an increase of $26 million from the same 1970 period.

But, while PC was having its troubles in coming up with a reorganization plan, Jersey Central at least got a plan filed. Under the CNJ proposal, the Federal government (with 47%), the state of New Jersey and C&O/B&O would be the principal stockholders of the reorganized company. As for Penn Central, its trustees had obtained one six-month delay in March; they asked for another six-month postponement in September, citing the "unprecedented . . . size and complexity of the case."

By the end of the year, however, PC could see a slight improvement in its financial situation. Through the first 11 months of 1971, the net loss had been cut from $290 million in 1970 to less than $250 million. Freight revenues increased, on sharply reduced traffic (with carloadings and ton-miles especially hard-hit by coal and dock strikes). And PC's 11-month operating ratio was knocked down from 92.1% in 1970 to 88.3% in 1971. PC also reported some improvement in its cash position, and it postponed until first-quarter 1972 a scheduled $25-million borrowing. Given "reasonably good luck," PC said, it should be able to go through the first quarter without additional loans.

PC President Moore's summary of the past year concluded that "We are making progress—solid progress." But, he said, the PC crisis has not passed: "Our progress must not obscure the fact that the railroad is deferring many priority claims, principally taxes, for which provision on a current basis cannot be indefinitely postponed."

Yearend estimates pointed to a full-year loss of $275 million (before extraordinary items). That would be an improvement of more than $50 million from 1970's loss—and, Moore said, the showing might have been even better had it not been for declines in traffic and "staggering increases in wage rates and the cost of materials."

In looking back, PC's president concentrated on service improvements made possible, in large part, by equipment acquisition (under lease), heavy equipment-repair programs and stepped-up property maintenance. PC will be in position, he said, to handle much more business in 1972 without unduly taxing its capacity. Other positive factors cited: (1) PC ran more trains in 1971, got better equipment utilization and provided a better service, but still managed to hold total transportation expense to about the same levels as in 1970; (2) on-time performance was much improved at key points; (3) PC was able to reduce its work force by more than 5,000; and (4) out of 163 lines and 1,732 miles slated for abandonment, PC had applied for permission on 117 lines and received it on 45.

Throughout the year, both the ICC and Congress kept close watch on PC and the troubled-railroad situation in general. Late in the year, an ICC staff report charged that the way in which PC implemented merger in 1968 resulted in "total chaos." Earlier, Sen. Hartke introduced his own plan for handling rail bankruptcies in the event of delays in filing and incourt approval of reorganization plans. His solution: Government takeover, presided over by DOT. Under Sen. Hartke's proposal, DOT would first develop an inventory of rail facilities and a list of essential services. Then, if a bankruptcy occurred and it appeared a reorganization would not be approved within two years (or if trustees requested it), DOT would submit a plan for maintaining essential service. Included would be consideration of extension of service by other roads. Federal acquisition of rights-of-way and creation of a quasi-public corporation. From that point on, a specific timetable would be in effect, for Congress to accept or reject the DOT plan, for DOT to act in the event Congress did not, and for DOT to acquire (or as a last resort to condemn) equipment and property.

In both general and specific terms, nationalization was a subject not infrequently discussed during '71. But very, very few people considered it a rational alternative, not only because of the costs involved but also because nationalization would only transfer, not solve, railroading's problems.

ASTRO/STA/DOT

Congress did not lack during 1971 for railroad- and transportation-aid proposals. What was lacking was action, beyond preliminary stages.

Railroad witnesses, including AAR President Ailes and ASTRO General Counsel George A. Smathers, set the stage in Senate Commerce Committee testimony beginning in late March.

Next-up came introduction of three freight-car bills—two generally following ASTRO recommendations and the third, the so-called Fastcor bill, having labor support. One of the ASTRO-related bills would set up a pool of general-service cars to be owned by a National Freight Car Corp. The Fastcor bill would also set up a national corporation to acquire and maintain a general-service fleet—but Fastcor would be able to control movement of privately-owned cars, not just its own; and methods of financing and conditions of ownership were also different from those in the ASTRO proposal.

So far as the railroads were concerned, the big legislative move of 1971 came late in July with introduction by Sen. Hartke and Rep. Brock Adams of the proposed Surface Transportation Act of 1971. Among its key points:

—Creation of a new Treasury division, molded on the old Reconstruction Finance Corp., to make available up to $5 billion in loans and guarantees to transportation companies which could not get other financing.

—A requirement that the ICC develop criteria for determining carrier revenue needs and set up expedited procedures for acting on rate changes made necessary by cost increases.

—Prohibition of state tax discrimination with regard to transportation property.

—A requirement that carriers of dry bulk commodities file reports and publish rates, and an extension of regulation of for-hire motor-carrier transportation to certain exempt agricultural commodities.

—Speed-up of rail abandonment procedures.

—A requirement that states spend at least 5% of Federal highway funds for grade-crossing safety improvements.

STA was important for a number of reasons, principal among them the recognition by Congressional leaders that much transportation reform was needed. But perhaps the most important single element connected with STA was the fact that it had the support of motor carriers and waterways operators as well as of railroads. That kind of surface-transportation cooperation never happened before.

On such matters as state tax discrimination and rail abandonments, DOT's proposals were not too different from those included in STA. The DOT bills also included these provisions:

—Permission for regulated carriers to change rates without regulatory-commission approval, subject to certain conditions.

—A cutback on certain activities of rate bureaus which would no longer be approved by the ICC or immune from antitrust-law coverage.

—An easing of market-entry restrictions on motor and water carriers.

—Design by DOT of a rolling-stock scheduling and control system.

—Creation of a Federal Railroad Equipment Obligation Insurance Fund which would be allowed to have no more than $3 billion in unpaid obligations outstanding at any one time.

Hearings were held during 1971 on most of the major proposals, principally in the Senate. But as the year ended, none of the plans had started into the pipeline toward final action ■

Choose one.

☐ Missouri Pacific RR
☐ Texas & Pacific Railway
☐ Chicago & Eastern Illinois RR
☐ Missouri Pacific Truck Lines
☐ Texas & Pacific Motor Transport
☐ All of the above...Mo-Pac

Mo·Pac. The right answer to your distribution needs. Five great carriers. One total system. With sixteen complete distribution services, including a full range of LCL/LTL, Intermodal services, and Containerpak. More than 12,000 miles of rail service in a 12-state area. More than 3,000 pieces of highway equipment over 17,000 miles of highway.

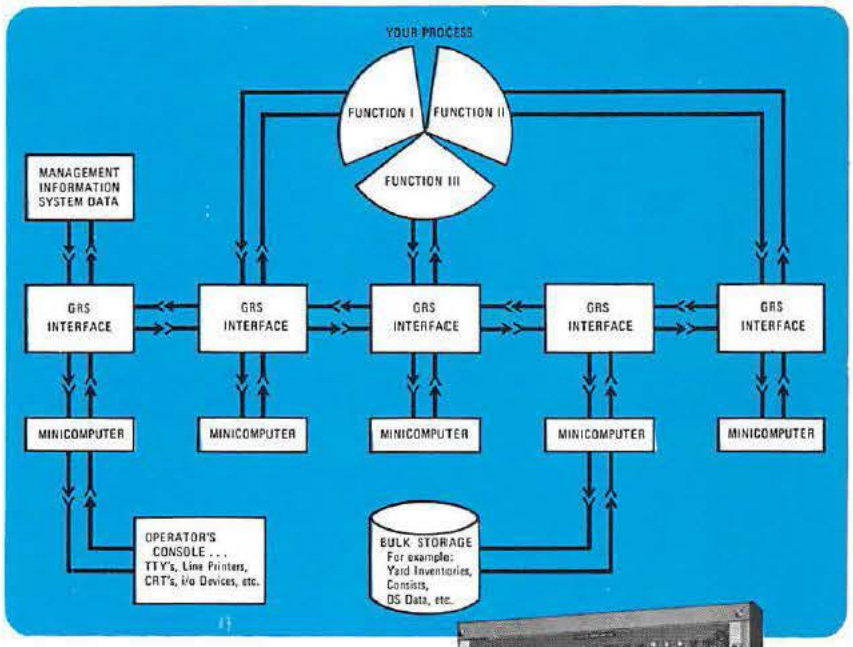
When you want someone who can do more for you, call Mo·Pac . . . and choose wisely.

mo-pac "hauls all"

Circle 18 on coupon page 83

NEW ... from GRS

DISTRIBUTED COMPUTER SYSTEM

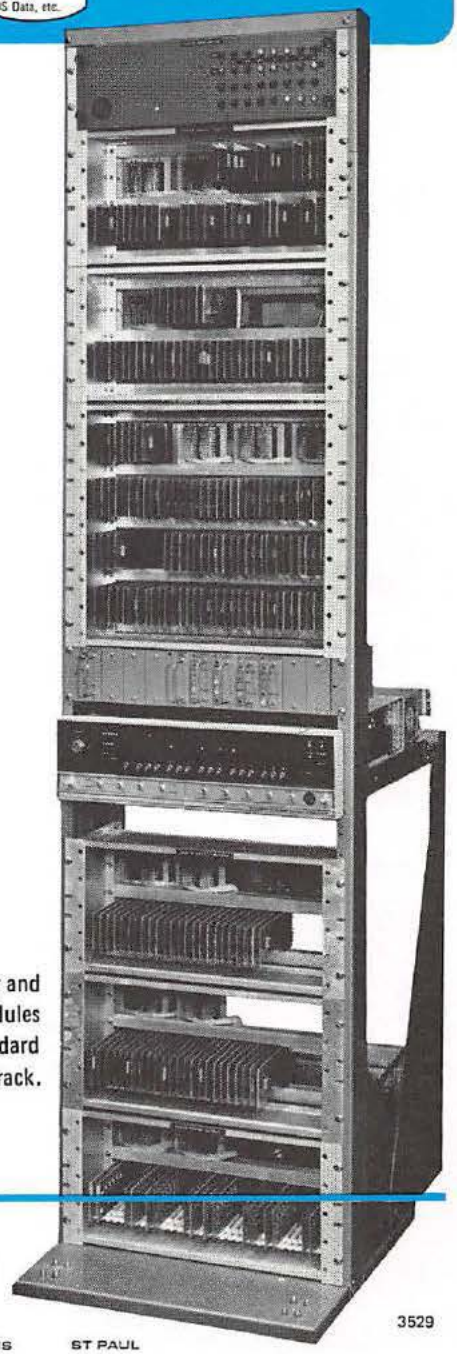


Based on the minicomputer, this advanced technology is ideally suited to modern centralized traffic control, car classification yards and terminals, and interlocking consolidation.

In a large facility, several minicomputers, with their associated interfaces, may be distributed to perform various functions with optimum efficiency. System availability is not tied to a single computer, as in the older, monolithic computer systems.

DCS features

Tailored computer technology
Building block type engineering and hardware
System exactly matches needs
Expansion easily achieved — minimum initial cost
Unique modular system
Low spare parts inventory
Reliability of solid-state component systems
Semi-independence of individual control subsystems
High system availablity
Inexpensive, interchangeable subsystems
Plug-coupled modules
Minimum downtime (diagnostic program aids)



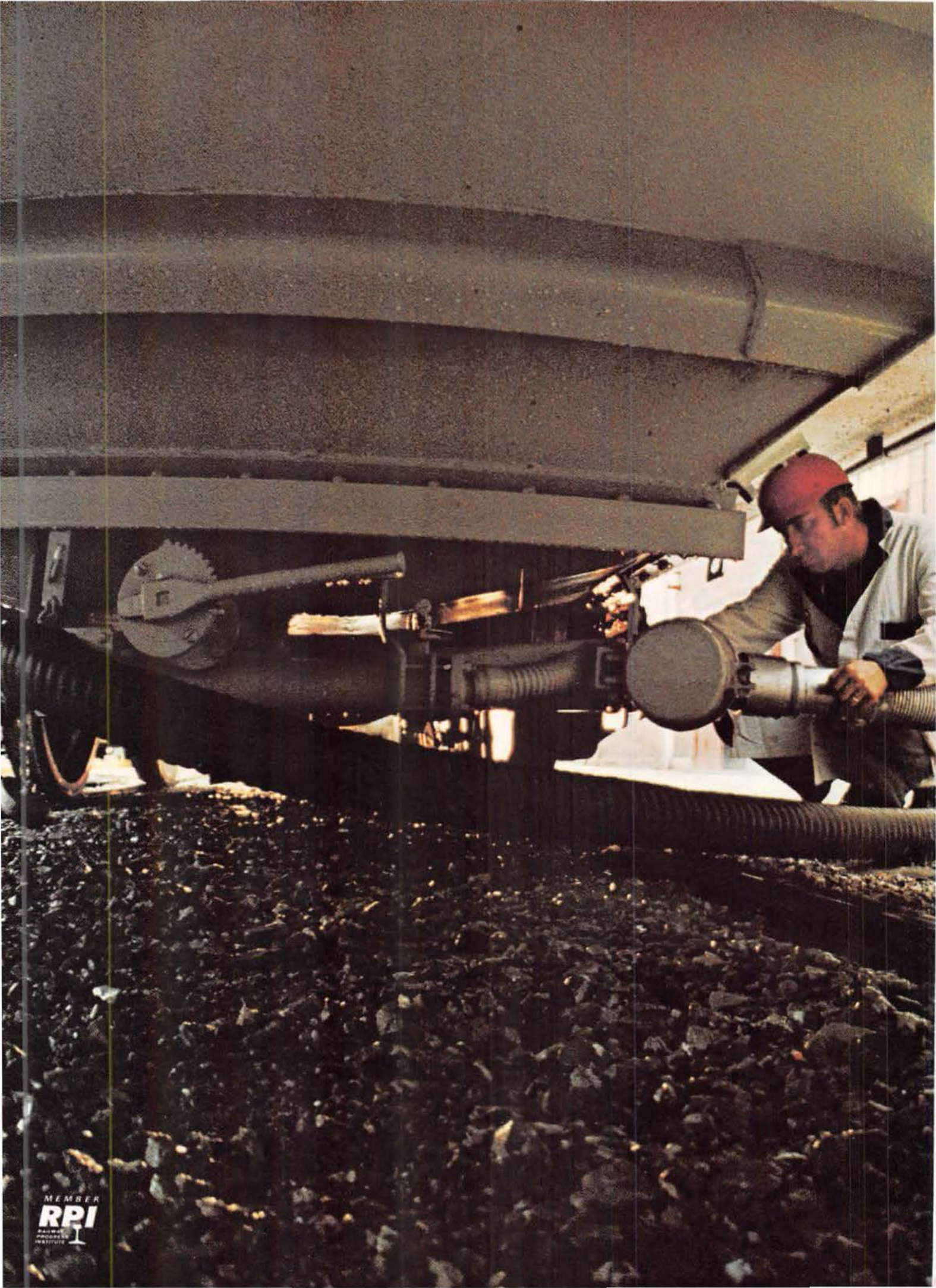
Minicomputer and interface modules fit on standard 19-inch rack.

For more information, ask for GRS Development D21.0200

GENERAL RAILWAY SIGNAL COMPANY
A UNIT OF GENERAL SIGNAL CORPORATION
ROCHESTER NEW YORK 14602
ATLANTA BOSTON CHICAGO MONTREAL NEW YORK OAKLAND ST LOUIS ST PAUL

3529

Circle 33 on coupon page 83


MEMBER
RPI

The Flour Power Car.

Handling's a lot simpler on ACF's Pressure Differential Center Flow car. In fact, one man can now hook up to unload in under 10 minutes. Because there's no bulky pressure sled to wrestle with.

We licked the sanitation problem, too. With hatches and outlets that seal out contaminants. So even difficult commodities arrive in superb condition.

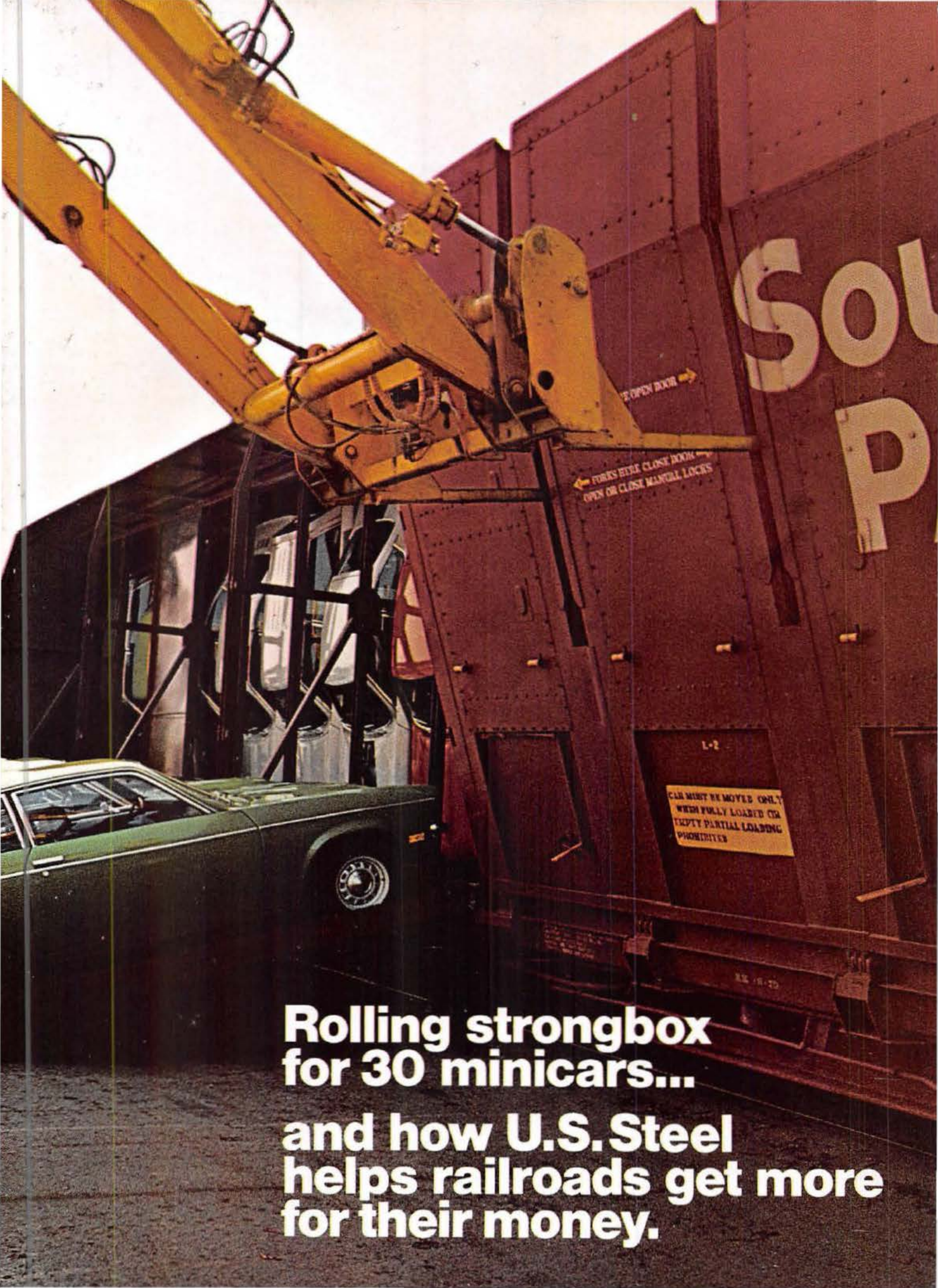
At just 5 pounds pressure per square inch, the PD Center Flow can also carry powders, pellets or granules. Economically. And unload them easily into highway trailers or silos.

Special fluidizing outlets discharge via pressure, vacuum or gravity. With cleaner cleanouts. Less handling cost.

ACF's PD Center Flow car. We keep the pressure low and the efficiency high.

ACF Industries, Incorporated, Amcar Division, 110 Clark Street, St. Charles, Mo. 63301.

acf ACF INDUSTRIES


Rolling strongbox
for 30 minicars...
and how U.S. Steel
helps railroads get more
for their money.

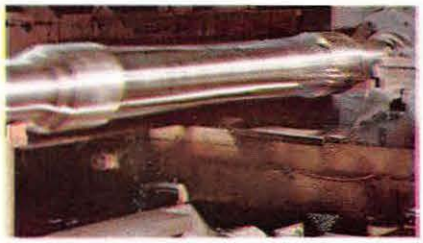
This giant freight car, Vert-a-Pac, hauls 30 little autos in scarcely more space than the usual tri-level rack car needs for 12 of standard size.

Southern Pacific and a major auto maker developed the 18-foot-high car to carry the 14-foot-long autos in a revolutionary position: nose-down on walls that also serve as loading ramps.

To cut the weight of this rolling strongbox (Vert-a-Pac is virtually vandal-proof and dirt-proof) the designers chose USS COR-TEN A Steel. This high-strength, low-alloy steel is 40 per cent stronger than carbon steel, has 5 to 8 times the resistance to atmospheric corrosion and gives twice the paint life.

It's used in the built-up center sill of the basic flat car (prime contractor: ACF Industries) and in the above-deck auto housing (subcontractor: St. Louis Car Division, General Steel Industries, Inc.). We're supplying steel—and good advice—on a lot of other projects important to the railroads: cars, rails, bridges, buildings.

If you'd like to talk, phone your USS man or write United States Steel, Box 86, Dept. 7394, Pittsburgh, Pennsylvania 15230.



New finish fights axle fatigue. As car weights and speeds go up, so does threat of axle fatigue. Our new standard finish (100-micro-inch average) fights it best. Data on request.

Stronger wheels for bigger loads. To learn how to make wrought wheels stronger, we test them on our unique inertia dynamometer: up to 30 million ft-lb of energy for a 40" wheel at 120 mph.

'61 stainless liner still tiptop. No corrosion loss; almost no adjacent galvanic corrosion: that's the verdict on these quick-emptying, hopper-floor sheets of USS Type 302 stainless steel.

USS and COR-TEN are registered trademarks.

USS **United States Steel**

For better continuous welded rail... today and tomorrow... HOLLAND

Introducing a new in-track welding concept

This self-propelled unit features a unique electric flash butt welding machine.

Actual welding can be controlled from the welding head by one man. This includes both car movement and the telescopic boom which swings the welding head from rail to rail.

Both sides can thus be welded in one pass.

This welder has its own electric, hydraulic and pneumatic power supply. And its own routine maintenance facilities.

Holland's new in-track flash butt welder. Continuous welding of tomorrow. Today.

On display at
REMSA EXPO '72
Booth 129

MEMBER RPI RAILWAY PROGRESS INSTITUTE

HOLLAND COMPANY

RAILWELD DIVISION • 1020 Washington Ave., Chicago Heights, Ill. 60411, Phones: (312) 756-0650/468-6566

Circle 34 on coupon page 83

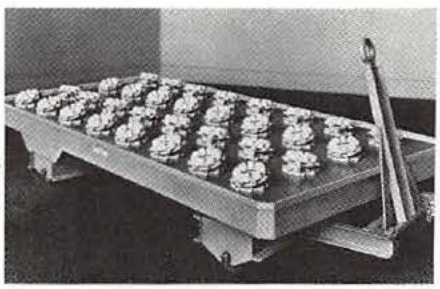
New Products Report

New line of wedge van trailers is introduced (RA-1)

A new series of aluminum wedge-style van trailers comprises a variety of models which include a 6-in. wedge on a 40- and 45-ft trailer and a 7½-in. wedge on 26-, 26½- and 27-ft doubles units. The new trailers are also offered in either beaded panel or exterior post design. Added cubic capacity for the 45-ft exterior post van with a 6-in. wedge is 87.4 cubic feet; for a 27-ft exterior post short length van with a 7½-ft wedge it reaches 34.5 cubic feet of additional cargo space.

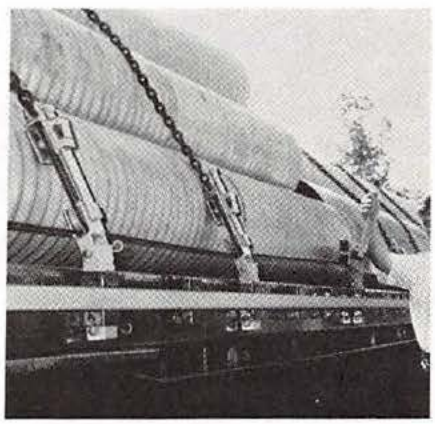
All side panels and side posts on the new series are engineered so that one uniform panel fits every location on the trailer. That is, each panel is of standard length, width and height to facilitate repairs and reduce parts inventories. Also, there is a lower over-all floor height and more loading height through the rear doors.

For even more cubic capacity, the manufacturer offers a bullnose option as an extra cost item. This feature—which increases the trailer front wall an extra foot in length—gives the carrier an extra 56.5 cubic feet of carrying capacity over conventional trailer fronts. It is available on both the exterior post and beaded panel models. *Fruehauf Division, Fruehauf Corp.*



Faster materials handling (RA-2)

Floor truck-mounted heavy duty, low profile, multi-directional idlers permit easy loading and unloading of flat-bottom cartons and sheet material. Heavy loads are easily turned and moved on and off the trucks in any direction with little effort. The idlers, which can be installed without drilling or bolting, are permanently set by adhesive. The trucks can be used as integral components of complete materials-handling systems, or singly for shifting any flat-bottom cargo, container or pallet from place to place. One man can easily shift heavy loads. Handling time and cargo damage are reduced. Cranes and other hoisting equipment can often be eliminated. *Hamilton Caster & Mfg. Co.*



Tension equalizer (RA-3)

The Pioneer Tension Equalizer—an easy, fast, safe tie-down system-provides uniform tension, which helps to prevent load shift. It also allows for automatic take-up, eliminating loose chains, cable or belting. The entire tie-down system can be installed in minutes. Load can be tied down in a matter of minutes. Tension is exerted at one central point on the unit and the entire load is tied down securely. An optional alarm system is available; it warns the driver of breakage of cable, chain or strapping while en route. *Pioneer Cover-All.*

FOR FAST INFORMATION ON 1 to 3 ITEMS ONLY USE THIS

EXPRESS CHECK-OUT CARD

PLACE NUMBER OF ITEM IN CIRCLE

◯ ◯ ◯

AND AIRMAIL DIRECT TO PUBLISHER TODAY

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ 1/31/72

350 Broadway, N.Y., N.Y. 10013 READERS' SERVICE (Att. J. Meyer)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89

PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGES 83-84 MARKED: RA-1 RA-2 RA-3 RA-4 RA-5 RA-6 RA-7 RA-8

☐ PLEASE SEND INFORMATION ABOUT SPECIAL RAILWAY AGE SUBSCRIPTION PLAN FOR YOUR EMPLOYEES AND CUSTOMERS.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

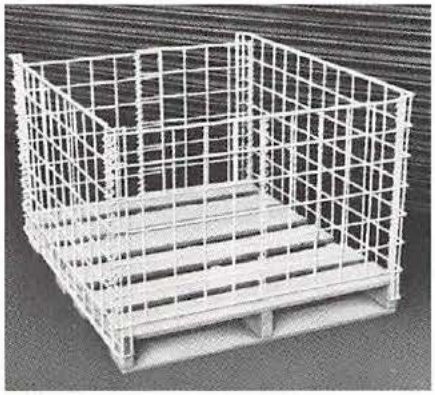
CITY _____ STATE _____ ZIP _____

Inquiries can be processed only if title and company are shown. 1/31/72

Fiber glass panels (RA-4)

A new fiber glass ribbed liner panel system has been disigned so that its two basic sizes can satisfy virtually all panel requirements of reefer, container, trailer and truck body builders. The system obviates the problems and costs to builders of inventorying a multitude of panel sizes and configurations.

Called the Alspan 1216 panel line, the new panel can be installed on either 12-in. or 16-in. post centers. It can be used as either a standing or inverted rib panel. It is produced in two rib lengths: an 80-in. and a 90-in. rib. From these two rib lengths any number of panel lengths can be created. The 80-in. rib panel can be as long as 96 in.; the 90-in. rib panel can run out to a maximum of 108 in. Both sizes have a 1¼-in. lap step, with 2 in. of flat at the bottom. The Alspan 1216 panels measure 49¼-in., including a 1¼ in. lap step. They are molded in thicknesses of 0.093 or 0.120 in. *Molded Fiber Glass Co.*

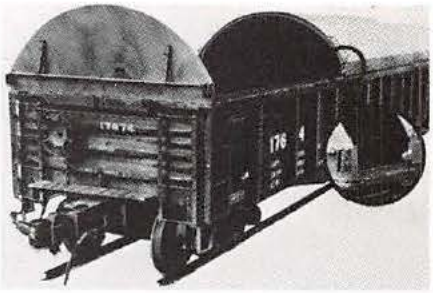


New Cargotainer (RA-5)

A new "Wrap-Around" Cargotainer has been developed. Ruggedly constructed of the same welded wire used in regular Cargotainers, the "Wrap-Around" fits securely and safely over wooden pallets. They thus become the four sides for the base, providing economical containers when needed for shipping or storage. Filled containers are stackable and collapsible when not in use. They are available in all popular sizes, at half the price of steel containers. They can be made of lighter welded wire if high stacking is not required. *Cargotainer Division, Tri-State Engineering Co.*

Telescopic car cover (RA-6)

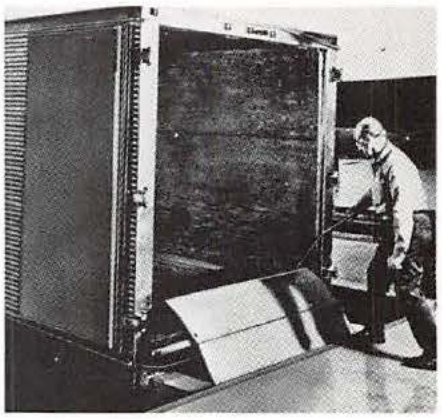
A self-locking arrangement which secures with the momentum of the first car motion is the primary feature of a new telescopic gondola car cover. The possibility of damage to covers, when men forget to close them, is minimized.



Long-life roller bearings make opening and closing a one-man job; the sections nest in any of three positions. The flexible, lightweight design accommodates to flexing of the carbody. Auto-Latch Telescopic Covers are of welded, all-steel design. *Shunk Manufacturing Co.*

Filling controls (RA-7)

Accurate control of tank-car loading and discharge is achieved with sensors containing no moving parts and ruggedly constructed to withstand shock and vibration. Sensor functions are unaffected by clinging droplets, foam, vapor or build-up of coatings. Because of their low-energy circuitry the Sensall units are suitable for hazardous locations; car filling is speeded and there is no waste from overflow. *National Sonics Corp.*



Terminal dockboard (RA-8)

A completely new low-priced terminal dockboard has a rated capacity of 20,000 lb. Called Model 502, the permanent-type, mechanical board has a full width of 5 feet, 4 inches, and an over-all extension of 27 inches (11¾ inches beyond the bumpers). No adjustments are required. The board comes equipped with a pair of laminated bumpers 8 in. x 12 in. x 4 in. A single heavy-duty compression spring provides the lifting action of both plate and lip section. The price of Model 502 is about equal to that of portable plates of comparable size and capacity. Quantity discounts are offered. *Kelley Co.*

PLACE AIRMAIL STAMP HERE

RAILWAY AGE
350 Broadway
New York, N.Y. 10013

ATTENTION:
R.G. LEWIS, PUBLISHER

AIR MAIL

BUSINESS REPLY MAIL
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY

RAILWAY AGE
350 Broadway
New York, N.Y. 10013

ATTENTION:
J. MEYER

FIRST CLASS
PERMIT NO. 153
NEW YORK, N.Y.

We've put a nation-wide network of A-I-D® Service Specialists together.

You put them to work–anytime, anyplace.

The trend of sell 'em and forget 'em isn't our style at FreightMaster. We have living proof that we're totally serious when it comes to service before, during, and (most important) after the sale.

The proof is our system of Assistance-In-Depth Service Engineers located throughout the nation. These A-I-D specialists are our anytime, anywhere johnny-on-the-spot experts when it comes to keeping FreightMaster equipment performing for you.

It takes a lot to become number one in end-of-car cushioning sales. We're doing a lot to maintain the confidence you expressed by making us number one.

The A-I-D team is just one effort. Ask your FreightMaster Sales Engineer about some of the others. He has the whole story on why FreightMaster should be number one in your cushioning program plans, too.

FreightMaster

A Halliburton Company

NEW CONCEPTS OF INCREASED PROTECTION FOR CARS AND CARGO THROUGH RESEARCH

In U.S.A.: P.O. Box 40555, Fort Worth, Texas 76140 •
In Canada: Hawker Siddeley Canada Ltd., Montreal •
In Mexico: Materiales y Servicios Ferroviarios, S.A., Av. de los Insurgentes Sur No. 1824, Mexico 20, D.F.

Circle 35 on coupon page 83

MEMBER RPI

1971 REVIEW

Car and locomotive orders;

1971 FREIGHT-TRAIN CAR ORDERS

Purchaser	No.	Type	Capacity	Builder
Allied Chemical	20	Tank	200,000	GATC
Alton & Southern	400	Hopper	200,000	Bethlehem
Atchison, Topeka & Santa Fe	100	Cov. Hopper	200,000	ACF
	200	Box	140,000	ACF
	200	Box	200,000	ACF
	200	Hopper	200,000	Greenville
	25	Airslide Cov. Hopper	200,000	GATC
	400	Mech. Refrig.	140,000	Co. Shops
	200	Ins. Box	200,000	Co. Shops
	31	Flat	140,000	ACF
	500	Cov. Hopper	200,000	P-S
Atlanta & West Point	35	Wood Chip	200,000	P-S
Bangor & Aroostook	200	Box	140,000	Berwick
Bessemer & Lake Erie	800	Hopper	200,000	P-S
Bethlehem Steel Corp.	20	Ore	140,000	Co. Shops
	13	Gondola	140,000	Co. Shops
	15	Hopper	140,000	Co. Shops
	20	Ore	140,000	Berwick
Burlington Northern	100	Bulkhead Flat	140,000	General Steel
	150	Wood Chip	200,000	Gunderson
	400	Cov. Hopper	200,000	Gunderson
	8	Box	140,000	P-S
	400	Mech. Refrig.	140,000	Pacific Car
	10	Center Flow	200,000	ACF
	65	Airslide	200,000	GATC
	500	Center Flow	200,000	ACF
	22	Hopper	200,000	Darby
	50	Caboose	.....	International
	300	Gondola	154,000	Thrall
	400	Hopper	200,000	Bethlehem
	200	Box	200,000	ACF
Chesapeake & Ohio	42	Box	180,000	ACF
	11	Box	170,000	ACF
	13	Box	80,000	P-S
	25	Ins. Box	170,000	FGE*
	55	Ins. Box	139.000	FGE
	100	Cov. Hopper	200,000	ACF
	75	Cov. Hopper	200,000	P-S
Baltimore & Ohio	1	Flat	226,000	Berwick
	11	Caboose	.....	International
	10	Air Dump	.....	Difco
	2532	Hopper	190,000	Co. Shops
	2000	Hopper	190,000	Bethlehem
	11	Box	180,000	ACF
	104	Box	80,000	P-S
	44	Ins. Box	139,000	FGE*
	175	Cov. Hopper	200,000	ACF
	25	Cov. Hopper	190,000	GATC
	125	Cov. Hopper	200,000	P-S
	128	Caboose	.....	International
	10	Air Dump	.....	Difco
Chicago & North Western	200	Hopper	200,000	Bethlehem
Chicago, Rock Island & Pacific	100	Hopper	100,000	Darby
	10	Caboose	.....	International
Cities Service	10	Tank	200,000	GATC
Coca Cola, USA	38	Cov. Hopper	.....	GATC
Colorado & Southern	10	Caboose	.....	International
Colorado & Wyoming Railway	85	Rapid Discharge Hopper	200,000	Ortner
Consolidation Coal Co.	50	High Side Gondola	200,000	Greenville
Denver & Rio Grande Western	150	Gondola	200,000	Thrall
	50	Box	200,000	ACF
	10	Airslide	200,000	GATC
	100	Hopper	200,000	Bethlehem
	250	Ins. Box	140,000	Pacific Car
	50	Ins. Box	200,000	Pacific Car
Detroit & Mackinac	100	Box	140,000	P-S
Detroit, Toledo & Ironton	17	Hi-Cube Box	148,000	Greenville
	200	Gondola	199,000	Thrall
Detroit, Toledo & Lake Shore	2	Flat	140,000	Bethlehem
E.I. du Pont de Nemours	20	Tank	200,000	GATC
Erie Lackawanna	250	Gondola	154,000	Greenville
	500	Gondola	200,000	P-S
Florida East Coast	4	Vert-a-Pac	140,000	Whitehead & Kales
	50	Gondola	200,000	Thrall
Fruit Growers Express	540	RBL Box	140,000	Co. Shops
	200	RPL Box	200,000	Co. Shops
General American Trans. Corp.	75	Hopper	200,000	Bethlehem
Georgetown Railroad	100	Rapid Discharge Hopper	200,000	Ortner
Grand Trunk Western	50	Cov. Hopper	200,000	P-S
	85	Flat	140,000	P-S
	172	Flat	140,000	Bethlehem
Green Bay & Western	20	Box	100,000	P-S
	2	All-door Box	140,000	Thrall
Greyhound Leasing	2520	Hopper	200,000	Bethlehem
Gulf, Mobile & Ohio	100	Wood Chip	154,000	Greenville
Illinois Central	100	Caboose	100,000	Co. Shops
	7	Flat	140,000	P-S
Illinois Terminal	50	Gondola	200,000	Thrall
	100	Cov. Hopper	200,000	Thrall
Kansas City Southern	10	Ballast	200,000	Thrall
Louisville & Nashville	350	Cov. Hopper	200,000	ACF
	200	Hopper	200,000	Bethlehem
	45	Airslide	200,000	GATC
	57	Wood Chip	200,000	Ortner
	300	Hopper	160,000	P-S
	78	Box	200,000	P-S
	60	Box	140,000	P-S
	100	Box	140,000	P-S
	200	Box	140,000	P-S

*Leased

signaling and M/W statistics

Purchaser	No.	Type	Capacity	Builder
Missouri Pacific System*	1500	Cov. Hopper	200,000	P-S
	275	Box	140,000	ACF
	225	Hi-Cube Box	140,000	ACF
	60	Caboose	.....	International
	9	Box	140,000	P-S
	60	Hopper	200,000	Bethlehem
	59	Airslide	200,000	GATC
	200	Ins. Box	140,000	Pacific Car
	1150	Box	140,000	P-S
	550	Box	200,000	ACF
	200	Gondola	200,000	Greenville
	200	Wood Chip	200,000	Greenville
	16	Vert-A-Pac	.....	Whitehead & Kales
Norfolk & Western	20	Box	140,000	P-S
	30	Box	180,000	P-S
	100	Box	200,000	P-S
	1269	Hopper	200,000	Co. Shops
	1000	Gondola	200,000	Co. Shops
Norfolk Southern	150	Box	140,000	ACF
	150	Box	140,000	Southern Iron
North American Car Corp.	600	Cov. Hopper	4427 cu.ft.	North American
	100	Tank	100,000	North American
	596	Tank	200,000	North American
	141	Tank	200,000	North American
	237	All-Door Box	.....	Thrall
	100	PD Hopper	.....	Butler
	402	Hopper	4740 cu.ft.	P-S
	5	Airslide	4180 cu.ft	GATC
	5	Hopper	5650 cu.ft	P-S
	295	Hopper	4427 cu.ft	P-S
	4	Hopper	4180 cu.ft	GATC
	25	Hopper	4350 cu.ft	National Steel
	20	Hopper	4350 cu.ft	Hawker Siddeley
	28	Hopper	4350 cu.ft	Hawker Siddeley
	40	Tank	13,694 gal.	AMF Beaird
	3	Tank	20,000 gal.	Hawker Siddeley
	25	Tank	.....	Hawker Siddeley
	10	Tank	33,977 gal.	Davie
	26	Tank	33,800 gal.	Procor
	17	Piggyback Flat	.....	Bethlehem
	2	Bi-Level Flat	.....	Hawker Siddeley
	25	RBL Box	.....	Pacific Car
	65	Box	140,000	National Steel
Peabody Coal Co.	220	Hopper	200,000	Greenville
Penn Central	1251	Cov. Hopper	200,000	P-S
	2520	Hopper	200,000	Bethlehem
	1500	Gondola	200,000	Fruehauf
	500	Gondola	140,000	Fruehauf
	1000	Box	140,000	ACF
	567	Box	140,000	U.S Railway Equipment
Pennsylvania Power & Light Co.	2	Hopper	200,000	Bethlehem
Reading	300	DF Box	140,000	Rydal
	200	Hopper	200,000	Bethlehem
	10	Caboose	.....	International Car
	100	Gondola	200,000	Rydal
	50	Coil Steel	200,000	U.S. Railway Equipment

*Includes Missouri Pacific, Texas & Pacific, Chicago & Eastern Illinois and American Refrigerator Transit.

Purchaser	No.	Type	Capacity	Builder
Relco Tank Line	180	Tank	200,000	GATC
Rydal Equipment Co.	200	Hopper	200,000	Bethlehem
St. Louis-San Francisco	200	Gondola	200,000	Darby
	40	Hopper	200,000	Thrall
	50	Mech. Refrig.	140,000	Fruit Growers
	50	Mech. Refrig.	200,000	Fruit Growers
	50	Bulkhead Flat	200,000	Ortner
	250	Hi-Cube Box	140,000	ACF
	165	Ins. Box	140,000	Pacific Car
	100	Box	140,000	ACF
Seaboard Coast Line	150	RBL Box	140,000	Fruit Growers
	3	Flat	320,000	Berwick
	400	Wood Chip	180,000	P-S
	200	Gondola	154,000	Co. Shops
	3	Flat	400,000	Berwick
	100	Box	180,000	P-S
	200	Gondola	154,000	Co. Shops
	1000	Box	154,000	P-S
	100	Gondola	154,000	Greenville
	7	Vert-A-Pac	.....	Whitehead & Kales
Soo Line	50	Gondola	200,000	Thrall
	10	Cov. Gondola	200,000	Thrall
	70	Gondola	200,000	Thrall
	150	Cov. Hopper	200,000	Thrall
Southern	1400	Box	140,000	P-S
	50	Cov. Hopper	.....	GATC
	600	Hopper	200,000	Greenville
	60	Box	200,000	P-S
	40	Flat	140,000	P-S
	50	Bulkhead Flat	178,000	Thrall
Southern Pacific	100	Ins. Box	200,000	Pacific Car
	50	Cushion Box	200,000	ACF
	1250	Ins. Box	140,000	Pacific Car
	150	Cushion Box	140,000	ACF
	2000	Cushion Box	140,000	Gunderson
	500	Cushion Box	140,000	Pacific Car
	600	Refrigerator Box	130,000	Pacific Car
	776	Gondola	200,000	Gunderson
	15	Cov. Gondola	200,000	Evans Products
	600	Cov. Hopper	200,000	ACF
	50	Flat	140,000	Bethlehem
	50	Flat	140,000	P-S
	650	Bulkhead Flat	140,000	ACF
	200	Box	200,000	Gunderson
	850	Wood Chip	200,000	Gunderson
	10	Steel Coil	200,000	U.S. Railway
Toledo, Peoria & Western	50*	Cov. Hopper	200,000	P-S
Trailer Train Co.	56	Flat	110,000	ACF
	31	Flat	140,000	ACF
	23	Flat	140,000	ACF
	15	Flat	140,000	ACF
	287	Flat	140,000	Bethlehem
	72	Flat	200,000	Bethlehem
	97	Flat	140,000	P-S
	54	Flat	140,000	P-S
	64	Flat	140,000	P-S
	34	Flat	140,000	P-S
	184	Flat	140,000	P-S

*Leased from U.S. Railway Equipment

1971 FREIGHT-TRAIN CAR ORDERS

Purchaser	No.	Type	Capacity	Builder
Union Carbide Corp.	130	Tank	200,000	GATC
Union Pacific	600	Mech. Refrig.	140,000	Pacific Car
	55	Gondola	200,000	Gunderson
	100	Hopper	200,000	Darby
	10	Caboose	.....	International
	50	Airslide	200,000	GATC
	400	Hopper	200,000	Greenville
	375	Box	140,000	Co. Shops
Union Railroad	8	Caboose	.....	Co. Shops
U.S Railway Leasing	100	Cov. Hopper	200,000	U.S. Railway Equipment
	567	Box	140,000	U.S. Railway Equipment
	590	RBL Ins. Box	140,000	U.S. Railway Equipment
	25	Steel Coil	200,000	U.S. Railway Equipment
Various Industrial	1740	Cov. Hopper	.....	ACF
	994	Tank	.....	ACF
	1000	Box	.....	ACF
	23	Tank	200,000	GATC
	40	Rapid Discharge Hopper	160,000	Ortner
	82	Rapid Discharge Hopper	200,000	Ortner
	50	Cov. Hopper	200,000	P-S
	115	Cov. Hopper	200,000	P-S
	235	Cov. Hopper	200,000	P-S
	500	Cov. Hopper	200,000	P-S
	79	Cov. Hopper	200,000	P-S
	183	Cov. Hopper	200,000	P-S
	200	Cov. Hopper	200,000	P-S
	50	Box	140,000	Thrall
	155	Cov. Hopper	140,000	Thrall
	56	Box	140,000	Thrall
	75	Box	140,000	Thrall
	100	Gondola	250,000	Thrall
	1	Dep. Center Flat	300,000	Thrall
	42	Wood Chip	200,000	Thrall
	33	Cov. Hopper	140,000	Thrall
	50	Box	140,000	Thrall
	20	Slab	200,000	Thrall
	50	Hopper	200,000	Thrall
	321	Tank	.....	Richmond Car
	1202	Tank	.....	Various
Western of Alabama	35	Wood Chip	200,000	P-S
Western Maryland	200	Hopper	200,000	Bethlehem
Zurn Industries	1	Depressed Center Flat	300,000	Berwick

1971 LOCOMOTIVE ORDERS

Purchaser	No.	Wheel Arrangement	Horsepower	Builder
Alabama By-Products	1	B-B	1,000	EMD
Alton & Southern	4	B-B	1,500	EMD
Atchison, Topeka & Santa Fe	37	...	3,600	EMD
	15	...	3,600	GE
Atlanta & St. Andrews Bay	1	B-B	2,300	EMD
Auto Train	5	B-B	3,600	GE
Baltimore & Ohio	65	B-B	3,000	EMD
Belt Railway of Chicago	6	B-B	2,000	EMD
Bessemer & Lake Erie	6	C-C	2,000	EMD
Birmingham Southern	2	B-B	1,000	EMD
Burlington Northern	25	C-C	3,600	EMD
	20	C-C	3,000	GE
	25	C-C	3,000	EMD
	15	B-B	1,000	EMD
	15	C-C	3,000	GE
	5	B-B	1,000	EMD
	15	C-C	3,000	EMD
	3	B-B	1,000	EMD
Chesapeake & Ohio	50	B-B	3,000	EMD
	10	B-B	3,000	GE
Chicago, Milwaukee, St. Paul & Pacific	4	C-C	3,600	GE
Chicago Short Line	1	B-B	1,500	EMD
Clinchfield	10	C-C	3,000	EMD
	7	C-C	3,600	GE
Colorado & Southern	7	C-C	3,600	EMD
Denver & Rio Grande Western	20	B-B	3,000	EMD
Department of Transportation	1	C-C	3,000	GE
DeQueen & Eastern	3	B-B	3,000	EMD
Detroit, Toledo & Ironton	6	B-B	2,000	EMD
	2	C-C	2,000	EMD
Duluth, Missabe & Iron Range	8	C-C	2,000	EMD
Elgin, Joliet & Eastern	2	B-B	1,000	EMD
Florida East Coast	10	B-B	3,000	EMD
Georgia Power	3	B-B	1,500	EMD
Grand Trunk Western	12	B-B	2,000	EMD
Great Lakes Steel	1	B-B	1,000	EMD
Gulf, Mobile & Ohio	20	B-B	2,000	EMD
	10	B-B	1,500	EMD
General Motors Diesel, B.C.	1	C-C	2,000	EMD
Houston Belt	3	B-B	1,500	EMD
Indianapolis Union	1	B-B	1,500	EMD
Kansas City Southern	9	C-C	3,000	EMD
	14	B-B	1,500	EMD
Kentucky & Indiana Terminal	5	B-B	1,500	EMD
Lake Erie, Franklin & Clarion	1	B-B	1,500	EMD
Lehigh Valley	4	B-B	2,000	EMD
Louisville & Nashville	10	C-C	3,000	EMD
	30	B-B	2,000	EMD
	10	B-B	1,500	EMD
	20	C-C	3,000	GE
	10	B-B	2,000	EMD
Missouri Pacific System*	5	C-C	3,000	GE
	45	B-B	2,000	EMD
New Orleans Public Belt	1	B-B	1,500	EMD
	6	B-B	1,000	EMD
	2	B-B	1,500	EMD
Norfolk & Western	35	B-B	2,000	EMD
	15	C-C	3,000	EMD
	25	B-B	3,000	EMD
Pacific Power & Light	1	B-B	2,000	EMD
Penn Central	50	B-B	1,500	EMD
Phelps Dodge	2	B-B	2,000	EMD
Pittsburgh & Lake Erie	20	B-B	1,500	EMD
St. Marys	1	B-B	1,500	EMD
St. Louis-San Francisco	6	B-B	1,500	EMD
	20	B-B	2,000	EMD
St. Louis Southwestern	8	B-B	1,500	EMD
Seaboard Coast Line	57	B-B	3,600	GE
	3	B-B	3,000	EMD
	21	C-C	3,600	EMD
	14	B-B	Mates	GE
	3	B-B	Mates	Custom Services
Soo Line	7	C-C	3,000	EMD
Southern	30	C-C	3,000	EMD
	5	C-C	3,300	GE
	5	B-B	2,300	GE
	29	C-C	3,000	EMD
	28	B-B	2,000	EMD

*Includes Missouri Pacific, Texas & Pacific, Chicago & Eastern Illinois and American Refrigerator Transit.

Purchaser	No.	Wheel Arrangement	Horsepower	Builder
Southern Pacific	97	...	1,500	EMD
	80	...	3,300	GE
	104	...	3,600	EMD
Terminal Railroad Assn. of St. Louis	6	B-B	1,500	EMD
Texas Mexican	2	B-B	2,000	EMD
Union Pacific	20	C-C	3,000	GE
	50	C-C	3,000	EMD
U.S. Steel	1	B-B	1,000	EMD
Western Maryland	5	B-B	3,000	EMD
Western Pacific	15	B-B	2,250	GE

1971 LOCOMOTIVE ORDERS—FOREIGN

Purchaser	No.	Wheel Arrangement	Horsepower	Builder
Argentina	136	C-C	1,500	EMD
	94	C-C	2,250	EMD
	20	C-C	3,000	EMD
Angola-CFA	5	C-C	2,000	GE
Brasil-ICOMI	1	B-B	1,500	EMD
Brasil-RFFSA	80	C-C	2,250	GE
Congo-KDL	15	C-C	1,550	GE
Costa Rica-Northern Railway	6	B-B	640	GE
Jamaica-Kaiser Bauxite	1	C-C	2,000	EMD
Liberia-National Iron	2	C-C	1,500	EMD
Malawi-Malawi Railways	4	C-C	1,500	MLW
Mexico-Altos Hornos	1	B-B	1,000	EMD
Mexico-Chih. al Pacifico	8	B-B	3,000	EMD
Mexico-National Railways of Mexico	20	C-C	3,000	MLW
	10	C-C	3,000	Diesel Div., GMC
	50	C-C	3,000	EMD
Mexico-Pacific of Mexico	8	C-C	3,600	MLW
Mexico-Sureste	5	B-B	2,000	EMD
Morocco-Rif Mines	2	C-C	1,500	EMD
Nigeria	54	1C-C1	1,500	MLW
South Africa-ISCOR	3	B-B	1,000	EMD
	11	B-B	1,050	GE
South Africa-SAR	50	C-C	1,550	GE
Tunisia-SNCFT	7	C-C	2,000	EMD
	22	C-C	2,000	MLW
Venezuela-Orinoco	4	C-C	2,000	EMD
Yugoslavia-JZ	14	C-C	3,000	EMD
	110	C-C	2,000	Diesel Div., GMC
	20	C-C	2,600	MLW Industries
Zambia - Roan Consol.	2	B-B	950	GE

1971 FREIGHT-TRAIN CAR ORDERS—CANADA

Purchaser	No.	Type	Capacity	Builder
Algoma Central	100	Hopper	200,000	National Steel
Aluminum Company of Canada Jamaica	2	Hopper	100,000	Marine Industries
Canadian General Transit	87	Tank	.....	Hawker Siddeley
Canadian National	850	Bulkhead Flat	140,000	Marine Industries
	550	Ins. Box	140,000	National Steel
	150	Tri-Level Flat	140,000	National Steel
	125	Wood Chip	140,000	National Steel
	210	Container Flat	140,000	Hawker Siddeley
	75	Bi-Level Flat	140,000	Hawker Siddeley
	300	Gondola	200,000	Hawker Siddeley
	75	Bi-Level Flat	140,000	Hawker Siddeley
	75	Caboose	100,000	Company Shops
	200	Gondola	200,000	Company Shops
Canadian Pacific	410	Gondola	210,500	Hawker Siddeley
	150	Container Flat	202,900	Marine Industries
	100	Piggyback Flat	140,000	Marine Industries
	30	Caboose	.....	Company Shops
Iron Ore Company of Canada	500	Ore Cars	200,000	Marine Industries
Pacific Great Eastern	50	Gondola	200,000	Hawker Siddeley
	300	Bulkhead Flat	155,000	Hawker Siddeley
	50	Piggyback Flat	155,000	National Steel
	700	Box	162,000	National Steel
	200	Wood Chip Gondola	140,000	National Steel
	5	Caboose	.....	Company Shops
	3	Locomotive Remote Control Cars	.....	Company Shops
Procor Limited	60	Gondola	200,000	Marine Industries
Quebec Cartier Mining	1	Depressed Center Flat	200,000	Hawker Siddeley
	20	Flat	200,000	Marine Industries
Quebec North Shore & Labrador	2	Mech. Refrig.	.....	Pacific Car
	2	Flat	.....	Marine Industries
Steel Company of Canada	4	Hot Metal Torpedo Cars	246,000	Marine Industries
	8	Gondola	200,000	Marine Industries
	13	Ingot Carrier Cars	230,000	Marine Industries

1971 LOCOMOTIVE ORDERS, CANADIAN DOMESTIC

Purchaser	No.	Wheel Arrangement	Horsepower	Builder
Algoma Central	3	C-C	3,000	Diesel Div., GMC
British Columbia Hydro & Power	2	C-C	2,000	Diesel Div., GMC
Canadian National	35	C-C	3,000	Diesel Div., GMC
	16	B-B	2,000	Diesel Div., GMC
CP Rail	64	C-C	3,000	Diesel Div., GMC
Pacific Great Eastern	4	C-C	3,000	MLW
	3	C-C	3,000	MLW
Quebec Cartier Mining	4	C-C	3,600	MLW
Quebec North Shore & Labrador	15	C-C	3,000	Diesel Div., GMC
	20	C-C	3,000	Diesel Div., GMC

1971 FREIGHT-TRAIN CAR ORDERS, CANADIAN FOREIGN

Purchaser	No.	Type	Capacity	Builder
Jamaica-Kaiser Bauxite	23	Aluminum Ore Cars	.....	Hawker Siddeley
Mexico	21	Tank	20,600 gal.	Hawker Siddeley
Chihuahua al Pacifico	50	Bulkhead Flat	100,000	Marine Industries Ltd.
Zambia, Africa	100	Box	100,000	Hawker Siddeley

RAILROAD SIGNALING INSTALLED IN 1971

Railroad	Highway Grade Crossings Protected by: Flashing-light signals	Flashing-light signals & gates	Block Signals & Traffic Control: Road Miles	Switches	Electric Locks	Signals	Train Stops Cab Signals	Safety Detectors	Miscellaneous Signal Units
Alaska	7	–	–	–	–	–	–	–	–
Atlanta & St. A. Bay	2	–	–	–	–	–	–	–	–
A&WP, Ga, W Ry Ala	–	2	–	–	–	–	–	5	–
BAR	2	–	–	–	–	–	–	–	1
B&LE	–	4	–	–	–	–	–	9	42
B&M	2	1	–	–	–	–	–	–	90
BN	50	22	9	8	–	16	–	18	–
CN	184	24	195	104	28	297	–	152	381
CP Rail	95	6	4	–	–	4	–	–	32
C&O	25	12	–	–	–	–	–	–	2
B&O	20	5	13	13	10	21	–	–	77
C&NW	43	18	–	–	–	–	–	8	49
C&WI	–	–	–	–	–	–	–	–	18
City Philadelphia	–	–	–	–	–	7	–	–	1
Cleveland TS	–	–	–	–	–	2	2 TS	–	7
D&H	–	–	–	6	–	5	–	2	7
D&RGW	4	3	–	–	–	–	–	35	21
DT&I	1	1	–	–	–	–	–	–	13
AA	4	–	–	–	–	–	–	–	–
DM & IR	2	–	18	–	–	2	–	–	32
EJ&E	–	2	–	–	–	–	–	–	–
EL	5	9	–	–	–	–	–	2	9
FEC	18	17	5	1	9	4	–	–	4
Frisco	30	5	2	–	–	2	–	20	14
GB&W	1	–	–	–	–	–	–	–	–
GM&O	7	1	–	–	–	–	–	7	–
IC	24	12	–	–	–	–	–	18	–
Iron Ore Co. (QNS&L)	1	–	–	4	–	18	–	2	–
KCT	1	–	–	–	–	–	–	–	140
LS&I	12	1	9	8	3	15	–	–	9
LV	5	2	–	–	–	–	–	–	2
L&N	17	2	12	7	1	19	–	9	2
MEC	5	–	–	–	–	–	–	–	19
MBTA	–	–	6	–	–	–	2 TS 50 CS	–	59
Milwaukee Road	30	9	–	–	–	–	–	–	19
MKT	8	1	3	–	3	–	–	–	–
MP	55	5	–	–	–	–	–	14	1
C&EI	5	5	105	6	29	22	–	–	34
T&P	15	5	–	–	–	–	–	–	54
NYCTA	–	–	–	–	–	28	146 TS	–	197
N&W	18	14	19	1	3	9	–	3	58
ONL	1	–	–	–	–	–	–	4	–
PC	61	26	175	26	17	78	–	23	22
PATH	–	–	–	–	–	–	–	–	73
Reading	2	–	2	–	8	–	–	–	5
RF&P	1	–	–	–	–	–	–	–	–
Rock Island	24	12	–	–	–	–	–	–	–
Santa Fe	72	110	60	–	–	–	–	9	–
SCL	30	20	26	19	23	45	–	37	24
Soo Line	9	1	–	–	–	–	–	4	15
Southern	35	15	9	5	1	7	–	7	4
SP	36	204	–	–	–	–	–	10	–
TP&W	–	–	–	–	–	–	–	4	–
UP	13	6	–	–	–	–	77 CS	8	20
WP	1	10	–	–	–	–	–	2	–
Totals	983	592	672	208	135	601	277	412	1,557

RAILROAD COMMUNICATIONS INSTALLED IN 1971

Railroad	Radio Units	Intercommunications: No. of Systems	Loudspeakers & Telephones	Channelizing Equipment: Carrier Units Terms. & Rep.	Data Sets	Telephone: Exchanges	Stations Available	Computer I/O units	ACI Scanners	Microwave Stations
Alaska	5	–	–	–	–	–	–	–	–	–
Algoma Central	4	1	29	–	–	–	–	3	–	–
Atlanta & St. A. Bay	5	–	–	–	–	–	–	–	–	–
A&WP, Ga, W Ry Ala	29	–	–	–	–	–	–	–	–	–
BAR	8	–	–	–	–	–	–	–	–	–
B Ry Chicago	8	–	–	–	–	–	–	14	–	–
B&LE	30	–	–	–	–	–	–	–	1	–
BN	251	2	45	284	280	1	40	31	–	2
CN	808	5	45	804	–	3	400	1810	13	7
C&O/B&O	195	5	21	54	12	1	150	18	–	6
C&NW	207	–	–	32	2	–	–	5	–	–
City Philadelphia	147	–	–	–	–	–	–	–	–	–
Cleveland TS	–	1	11	33	–	–	–	–	–	–

(Continued on page 92)

When you have over 200,000 Insulated Rail Joints in service and never a maintenance problem, you can afford to give a three year guarantee.

Only *I-Bond* Insulated Rail Joints can offer you an unconditional three year warranty.* Our insulated rail joints are the toughest you can buy. It has been proven with over 200,000 successful installations. They're scientifically designed to withstand the heaviest loads. For one customer the *I-Bond* Insulated Rail Joint is performing under 40 ton axle loads, handling a total of a million tons of traffic a day without any maintenance ever!

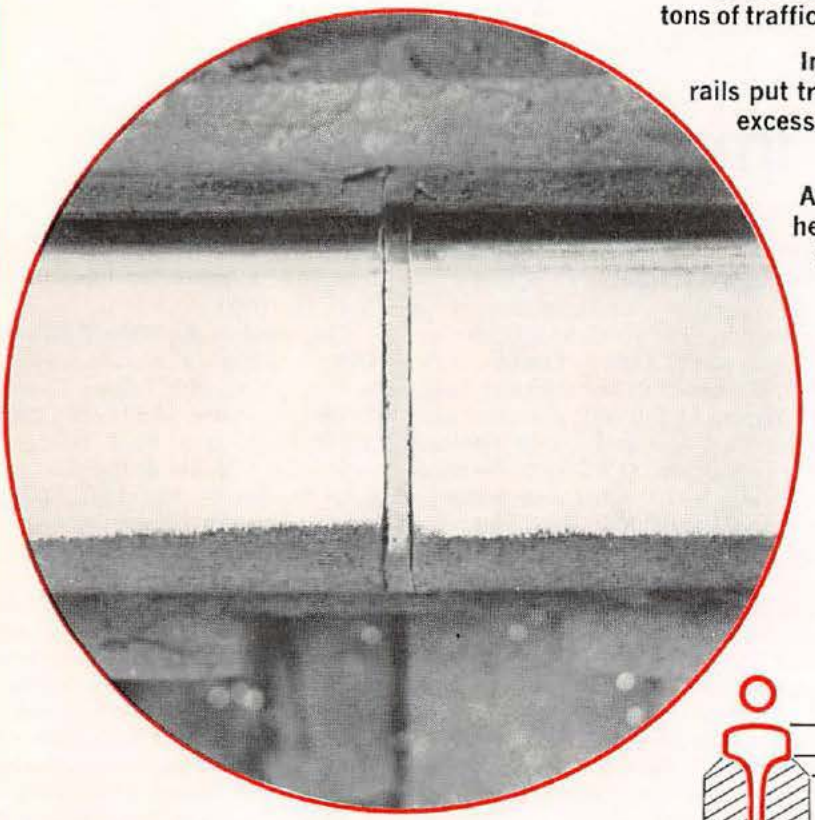
In cold weather areas where welded rails put tremendous tensile loads on joints, in excess of 750,000 pounds, *I-Bond* delivers without a single failure.

And *I-Bond* Insulated Rail Joints can help your railroad eliminate creep protection and cut maintenance costs.

Check the reader service card or better yet, call us . . . collect at (212) 682-6068.

We'll be happy to help you improve your track record. In fact, **we guarantee it.**

Manufactured in North America under license agreement with Klökner-Werke A G, West Germany.



Unretouched photo of *I-Bond* Insulated Rail Joint after 40 months and 75 million ton load.

i-bond

Intma International, Inc.
60 East 42nd Street, New York, N.Y. 10017

*In accordance with terms and conditions of seller's warranty.

REPRESENTATIVES: Southeastern Railroad Materials Inc., 595 North Avenue N.W., Atlanta, Ga. 30318
IN CANADA: Vale Enterprises, Ltd., 1120 Claire Crescent, Lachine, Quebec

Circle 36 on coupon page 83

RAILROAD COMMUNICATIONS INSTALLED IN 1971

Railroad	Radio Units	Intercommunications		Channelizing Equipment		Telephone		Computer I/O units	ACI Scanners	Microwave Stations
		No. of Systems	Loudspeakers & Telephones	Carrier Units Terms. & Rep.	Data Sets	Exchanges	Stations Available			
D&H	8	—	—	—	—	—	—	2	—	—
D&RGW	9	1	—	—	—	—	—	17	4	—
DT&I	4	1	5	—	10	1	—	9	7	—
AA	54	—	—	—	2	—	—	2	2	—
DM&IR	11	—	30	4	—	—	25	—	—	—
EJ&E	14	1	6	—	4	—	—	3	1	—
EL	18	—	—	9	7	—	—	7	—	—
FEC	—	—	—	—	—	—	—	—	1	—
Frisco	119	—	—	—	—	—	—	8	—	—
GB&W	10	—	—	—	—	—	—	—	—	—
GM&O	64	2	—	38	—	1	100	—	—	2
IC	183	—	—	66	70	—	—	9	5	—
Iron Ore Co. (QNS&L)	28	—	—	12	—	2	700	—	—	—
KCT	3	—	—	—	—	—	—	—	—	—
L&N	298	4	29	71	—	3	124	—	3	2
MeC	7	1	5	1	1	—	—	2	—	—
MBTA	433	10	1,200	4	—	—	—	2	4	—
Milwaukee Road	49	2	42	2	—	1	20	4	—	—
MKT	13	2	4	—	—	—	—	—	—	—
MP	149	4	170	232	153	3	200	67	—	2
C&EI	16	—	—	—	7	—	—	7	—	—
T&P	21	5	60	12	30	—	—	18	—	—
Montreal UCT	4	11	500	—	—	—	—	—	—	—
NYCTA	1,116	1	30	60	—	—	—	—	—	—
N&W	699	3	76	2	6	—	—	3	8	—
NS	1	—	—	—	—	—	—	—	—	—
ONL	22	—	—	89	1	—	—	15	—	—
PC	686	2	28	4	—	—	—	—	2	—
PATH	5	3	287	—	—	—	—	—	—	—
Reading	15	—	12	—	—	—	40	—	—	—
RF&P	3	—	—	—	—	—	—	—	—	—
Rock Island	47	—	—	2	—	2	40	—	—	—
Santa Fe	—	—	—	—	—	—	—	—	10	—
SCL	827	—	—	48	6	—	—	—	1	2
Soo Line	33	—	—	12	—	1	400	—	—	—
Southern	454	1	55	59	84	—	—	84	4	—
SP	389	3	29	91	104	1	50	32	—	1
TP&W	1	—	—	—	—	—	—	—	—	—
Toronto TC	79	—	—	—	—	—	—	—	—	—
UP	621	—	60	74	10	4	303	15	2	8
WP	54	—	—	—	4	—	—	—	—	—
Totals	8,264	71	2,779	2,099	793	24	2,592	2,187	68	32

Fixed property improvements

Hefty capital expenditures for fixed property are planned by Class I railroads in the United States and Canada for this year. Such expenditures are expected to be up substantially over 1971. By categories, line changes lead the list with 31% of the total allotments, followed by new track construction at 20% and yard improvements with 17%. The latter had led the field for three consecutive years.

The largest proposed undertaking in dollar terms, is a $36-million project by Norfolk & Western for relocating 25 miles of track on its New River division. The next largest item is $22.4 million which N&W will spend for continuing the construction of a branch line up Wolf Creek Branch. The third largest item is an $11.5-million project for rehabilitation of 50 miles of main track on the Long Island.

Following are brief descriptions of the major improvement projects authorized for 1972.

Bessemer & Lake Erie: Construct a rotary car dumper and associated conveying system at Conneaut, Ohio, to tie into existing coal facility; complete construction of additional yard tracks at Albion, Pa., to increase over-all capacity of yard by 800 cars, by relocating 5,000 feet of track and 47 turnouts.

Burlington Northern: Construct computer-controlled classification yard at Minneapolis (2nd year), $9,000,000; extend east end of yard at Lincoln, Neb., $800,000; construct six tracks at Spokane, Wash., $1,380,000; construct connecting track and bridge over Spokane River at Spokane, $1,650,000; construct line change and Latah Creek bridge at Spokane, $9,500,000; construct new connection between former GN-NP lines at Sandpoint, Idaho, $900,000; make bridge improvements at seven points, $1,335,800; revise trackage and install CTC from Red Oak to Creston, Iowa, $1,338,000; install multiplex, data sets, Teletype units in connection with COMPASS project, $620,000.

Canadian National: Rehabilitate Berlin subdivision with 120,000 cubic yards of crushed-rock ballast to replace gravel ballast.

Canadian Pacific: Construct second half of project for an automobile compound at Saint John, N.B.; continue the construction of Alyth Yard at Calgary, Alta.; and continue third-year program of replacing a portion of mainline on the Mountain subdivision for dam construction project, $4,900,000.

Central of New Jersey: Construct a container terminal at Port Elizabeth, N.J., $660,000.

Chesapeake & Ohio/Baltimore & Ohio: Expand and rearrange Oak Yard in connection with Jeffries Expressway at Detroit, Mich., $1,214,000; construct 3.9 miles of spur track to serve new coal mine of Jones & Laughlin Steel at Glen Daniel, W. Va., $1,025,000; construct 2.7 miles of side track to serve Royal Coal Co. at Claremont, W. Va., $508,000.

Elgin, Joliet & Eastern: Construct single-track vertical-lift bridge over the Calumet River at South Chicago, Ill., and remove the present double-track swing span; new structure will have 242-foot vertical-lift span with 45-foot flanking tower spans and approximately 165-foot-high towers, $7,000,000.

Frisco: Expand Tennessee Yard at Memphis, Tenn., $575,000; and install additional hotbox and dragging-equipment detectors.

Fort Worth & Denver: Begin project involving construction of 4.7 miles of new line for relocation of Wichita Valley line, construction of 2.4 miles to serve the Call Field Industrial tract.

two new overhead highway bridges and a new railroad bridge over the Wichita River at Wichita Falls, Tex., $1,500,000; develop a 214-acre industrial district, involving new water, sewer, drainage and paving work at Houston.

Illinois Central: Construct pollution-control facilities on system, $1,450,000; extend suburban line, $1,364,166; complete construction of truck-shop building at Memphis, $655,000; construct new TOFC facility at New Orleans, La., $900,000; make shop-facility improvements at Paducah, Ky., $1,305,000; reconstruct bridge over Raccoon River at Yetter, Iowa, $850,000; improve and upgrade retarders at Markham Yard, Chicago, $536,000.

Long Island: Construct radio antennas at East River and Atlantic tunnels, $555,000; make signal improvements from Hall to Nassau, $765,000; install highway protection, $1,080,000; renovate Long Island concourse of Penn Station, $2,000,000; and complete rehabilitation of 50 miles of mainline track, $11,500,000.

Louisville & Nashville: Construct new run-through diesel shop at Louisville, Ky., $1,920,700; and construct coal spur to serve new U.S. Steel mine at Cumberland, Ky., $2,000,000.

Norfolk & Western: Continue relocation of 25 miles of main track in West Virginia because of construction of Bailey Lake project for flood control on New River division, $36,000,000; continue construction of 24 miles of branch line up Wolf Branch Creek in Mingo county, W. Va., and Martin county, Ky., $22,400,000; construct trackage to serve new coal-loading operations on Wolf Creek Branch, $870,000; construct new trackage to serve coal-loading operations on Wolf Creek Branch, $815,000; install traffic control, construct four storage tracks, one assembly and one passing track, renovate brick office building from Vabrook, Va., to Hyco, N.C., $1,900,000; install 66 miles of traffic control and extend siding at Hadley, Ill., $837,000; construct traffic control and convert "AK" interlocking at Dunkirk, N.Y., to automatic operation from Brocton, N.Y., to Blasdell, $937,000; relocate and upgrade locomotive service facilities at Shaffers Crossing.

Penn Central: Consolidate area route from Pittsburgh, Pa., to Johnstown, $3,148,000; make improvements because of the sale of property to Commonwealth of Pennsylvania at Pittsburgh, $594,000; alter and add to Enola (Pa.) Yard, $788,000, with replacement of two master retarders in Enola Yard, $406,000; expand Perlman Yard at Selkirk, N.Y., $6,094,000; expand Buckeye Yard at Columbus, Ohio, $2,599,000; consolidate shops and purchase equipment to upgrade tie and surfacing gangs on system, $3,335,000; improve north-south route and expand Elkhart Yard, $6,479,000.

Richmond, Fredericksburg & Potomac: Modernize car retarders on North Hump at Potomac Yard, Alexandria, Va., $1,044,800.

Santa Fe: Renewal of 352 track-miles with CWR, and 16 track-miles with reconditioned, jointed rail on main, secondary, branch and yard tracks. Approximately 15 track-miles will be welded with "in-track" welding machines. Construct line change at Summit, Calif., between Barstow and San Bernardino to lower grade by 50 feet and eliminate sharp curves. Other 1972 projects include replacement of 525 panels of trestle-type structures and completion of the two-mile test track near Cassoday, Kan.

Union Pacific: Construct high-speed run-through track at Cheyenne, Wyo., $550,000; construct runaround track at Ogden, Utah, $657,000; construct 0.86 mile of line change at Hammett, Idaho, $840,000; stabilize large fills west of Omaha near Summit, Neb., $1,690,000.

Western Pacific: Relocate 5,000 feet of main track and construct yard tracks, including 19 turnouts; provide signal protection, drainage and lighting at South Sacramento, Calif., $500,000.

VAPOR NEWMATIC TOILET

simple

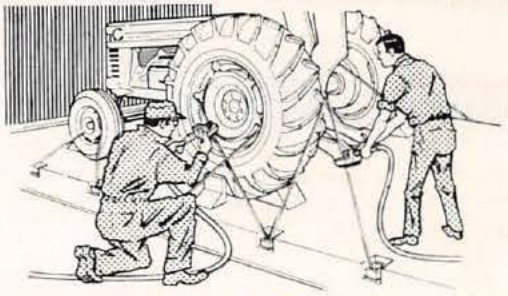
- To operate
- To service

try it... you'll like it!

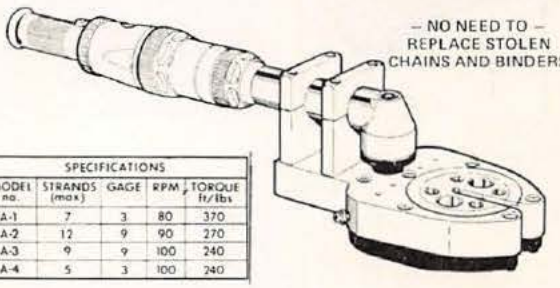
Write: Transportation Systems Division Vapor Corporation
6420 West Howard Street, Chicago, Illinois 60648
In Canada, Vapor Canada Limited

VAPOR CORPORATION SINGER TRANSPORTATION EQUIPMENT

LOADING PROBLEMS?



DOUBLE YOUR TIE DOWN EFFICIENCY AT A LOW COST.....With a unique new wire twisting tool engineered and manufactured exclusively by the J.X. PALMS COMPANY. Currently in use on the loading docks of the MASSEY-FERGUSON and FORD MOTOR COMPANIES, our wire twister has won their highest commendations and endorsement. A compact, lightweight tool that promises to out perform any similar equipment, it is A.A.R. approved and conforms to all insurance specifications.



– NO NEED TO – REPLACE STOLEN CHAINS AND BINDERS

SPECIFICATIONS				
MODEL no.	STRANDS (max.)	GAGE	RPM	TORQUE ft/lbs
A-1	7	3	80	370
A-2	12	9	90	270
A-3	9	9	100	240
A-4	5	3	100	240

J.X. PALMS co
40940 PRODUCTION DRIVE
(313) 294-6910 MT. CLEMENS, MICHIGAN 48043
Circle 47 on coupon page 83

As a matter of fact seal retention is one of the best reasons to buy Timken® bearings.

Every Timken® "AP" bearing seal we make today has an elastomeric coating, right here. It gives added seal retention. And by damping vibration, guards against fretting corrosion.

The positive flare on the O.D. of the case increases the effectiveness of the interference fit and the locking bead.

The premium stock we use has been selected to reduce distortion of the seal case during installation and removal. So retention is improved.

This rib, called the locking bead, combines with the interference fit to provide retention of the seal in the cup.

Our patented three-step case provides rigidity, so you're less likely to damage the seal in removal.

Every Timken "AP" seal wears its own batch identification number to assure you of consistent product performance.

Only a Timken Company approved seal has our name, our part number, material designation and date of manufacture right here.

We have more things going for seal and lubricant retention than anybody else. So you'll keep more of your cars moving—with fewer setouts caused by leaking seals. And that's what all the improvements in our seals really add up to.

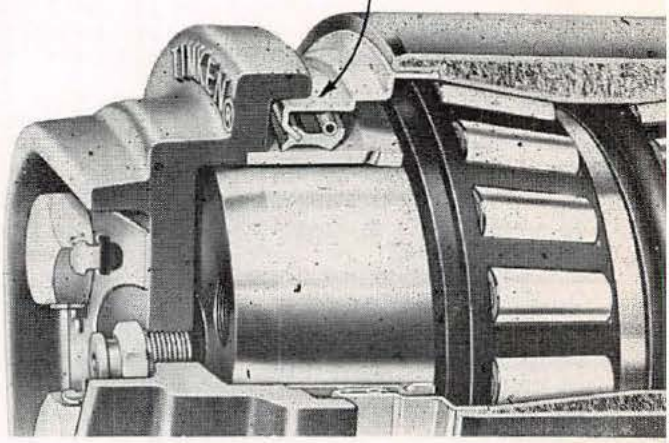
The Timken Company, Canton, Ohio 44706.

The elastomer is bonded directly to the case to reduce unsprung weight and minimize leakage.

Over 3,000,000 seal test hours in our own laboratory are behind the specs for seal compound, design, and quality control.

Mold, cavity and compound numbers—another assurance of continuous quality control.

The Bi-Rotational Elastohydrodynamic Sealing Mechanism is the most effective way found to date to minimize seal lip wear, retain lubricant and extend seal life.



TIMKEN®

REGISTERED TRADEMARK

TAPERED ROLLER BEARINGS

Circle 52 on coupon page 83

Penn Central creates Intermodal Division, a new profit center

In a bold bid for more piggyback business, Penn Central has created a new Intermodal Division as an "independent profit center." The new division, organized within the railroad's sales and marketing department, is headed by Roy L. Hayes as assistant vice president-intermodal.

Said PC President William H. Moore: "Penn Central will make extraordinary efforts to develop more piggyback business by fully exploiting the lower cost inherent in moving trailers and containers by rail. We will offer attractive rates which should appeal to all users of trailers, or containers, shippers or carriers.

Roy L. Hayes

"Our program includes the selling of transportation to other transportation companies. Our aim is to attract freight traffic for the longer distances from the highways in a manner which will help, rather than harm, the motor carriers. If we can achieve a high volume, the public should benefit through lower transportation costs, less highway congestion and air pollution, and reduced funding of highways."

As an "independent profit center," the division will be responsible for achieving revenue goals as well as for all expenditures related to TrailVan operations. The division is to be credited with all TOFC and mail revenues, and debited for all actual charges for service, such as rentals, leases, drayage and deramping. The latter services may be purchased either from Penn Central's own trucking subsidiaries, or from an outside contractor if the price or service is better.

Moore said the Intermodal Division is the railroad's "first actual profit center operation" as distinguished from profit estimates based on assumed costs.

The new division's chief, Hayes, was formerly vice president and general manager of Excelsior Truck Leasing Co. He will now report to Paul Funkhouser, senior vice president-sales and marketing.

Other key positions are occupied by George Shimrak, director-intermodal sales; Robert D. Walker, director-TOFC and mail service; and A. Buford Smith, director-intermodal pricing and marketing.

As part of the new program, Penn Central has appointed managers of terminal sales and services in 13 cities—Chicago, St. Louis, Detroit, Indianapolis, Cincinnati, Cleveland, Pittsburgh, Buffalo, Boston, New Haven, New York, Philadelphia and Baltimore.

In a related move, Moore announced the merger of four subsidiary trucking companies into one company, Pennsylvania Truck Lines, Inc. Merged into Pennsylvania Truck Lines were the former New York Central Transport Co., Penntruck Co., Inc., and Merchants Trucking Co.

Moore said: "The combined trucking company will integrate over-the-road operating rights of its predecessors across the railroad's 16-state system, thereby extending its own market capability and enhancing its growth opportunities. It will be an aggressive competitor with all modes of transport serving the most highly industrialized section of our country."

VAPOR NEWMATIC TOILET

simple

- Totally pneumatic
- Only one moving part

try it... you'll like it!

Write: Transportation Systems Division Vapor Corporation
6420 West Howard Street, Chicago, Illinois 60648
In Canada, Vapor Canada Limited

VAPOR CORPORATION SINGER TRANSPORTATION EQUIPMENT

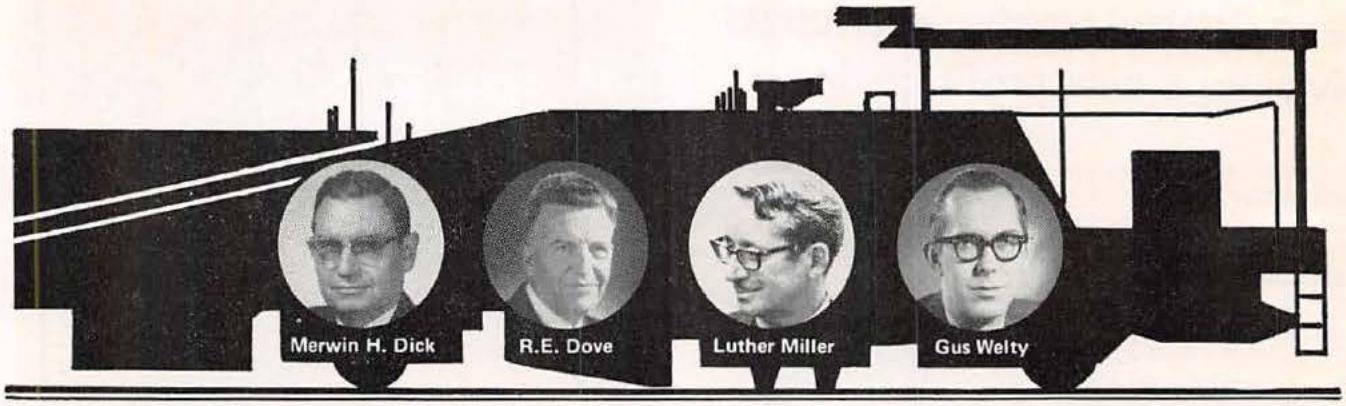
Circle 39 on coupon page 83

not every railroad man knows this

...but if maintenance is his job he should know that the only full line of lube and fuel filters for railroads is made by Wix Corporation. All made to engine builder specs. Please pass the word. You might get somebody out of a pickle. Wix Corporation, Gastonia, North Carolina 28052.

WIX

Circle 38 on coupon page 83



Get aboard the big AREA Meeting Special with the industry's top reporters

These four and other top Railway Age and Railway Track and Structures editors will be serving up the news for the annual American Railway Engineering Assoc. meeting at the Sherman House, Chicago, March 7, 8, and 9. There will be AREA meeting features, reports on the use of mechanized methods and equipment in maintenance of way and structures, a round-up of new engineering products and equipment. Both magazines will have extra distribution at the meeting. And this year the reports on roadway will have special importance. . .

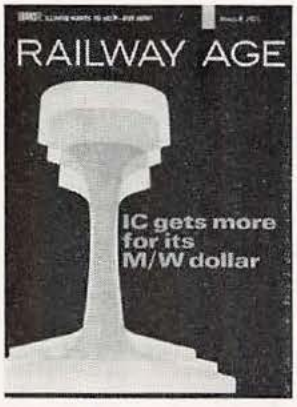
The engineering market is entering a boom phase...

Railroad m/w investment is in the news as never before with the imposition of new track standards by the Federal government.

It is conservatively estimated that the new FRA track standards will require an initial expenditure on the part of railroads of $1.629 billion–plus additional expenditures amounting to 116.2 million a year.

In addition, the President has signed a tax bill which permits railroads to take a tax credit for roadway improvements. Another pending measure would sharply increase outlays for railroad grade–crossing protection. The time is right for new selling effort!

These two publications give you unparalleled coverage...



Railway Age is a horizontal management semi-monthly that reports and interprets developments broadly interesting to all (in not-too-technical language). It gives you both a railroad's general management and the upper levels of its Engineering Department management.

Railway Track & Structures is a technical monthly –a specialized, vertical, departmental publication. It gives you the Engineering Department's top management and the men on its lower management and supervisory levels. It talks their special language.

Take advantage of this bargain opportunity

The March 6th issue of Railway Age and the March issue of Railway Track and Structures make a great team. Together, they will give your advertising full management coverage, deep specialized coverage in the Engineering Department–and double the impact at the highly important level where middle management and specialized Engineering Department administration overlap. Ask about our Industry Marketing Rate.

March's RT&S Equipment Economies Number will feature the use of mechanized methods and equipment in maintenance of way and structures. Also the program of the AREA meeting and a list of companies participating at the REMSA Exhibit. Extra Distribution at the meeting and exhibit area.

Closing dates: Railway Age–Feb. 21st; Railway Track and Structures–Feb. 10th.

The Railway Age Group, 350 Broadway, N.Y.C. 212–966-7700 29 E. Madison St., Chicago, 312–641-5815

Pullman sees improved car market for remainder of decade

Carbuilders have not had much to cheer about during the past several years—but Pullman's George L. Green thinks times are changing. Green, executive vice president of Pullman, Inc., and head of the transportation equipment group, is forecasting orders for between 65,000 and 85,000 freight cars annually for the rest of the 1970s, up from the approximately 50,000 cars ordered in 1970 and '71.

This optimism is based on a couple of factors—the growth of intermodal operations, the fact that surface carriers are moving toward that closer working relationship which stresses the general health and financial stability of the entire system, and projections that point to traffic growth for all modes. In the railroad market, Green says, "Nobody is more optimistic than the people at Pullman-Standard—which expects the 1970s to provide record-high business volume for the railroads." After the comparatively low ordering levels of recent years, however, "the railroads have more than a little catching up to do. . . . The turnaround should come this year, though I seriously doubt it will be dramatic. But help should come from a resurgent economy, from the investment tax credit and, of course, from the longtime need of railroads to update their fleet."

Green concedes that uncertainty about the political situation makes forecasting difficult. But, he adds, "I, for one, refuse to believe that the Congress and the Administration are so insensitive to the needs of the railroads . . . that they will delay much longer the legislation that is crucial if railroads are to function with any degree of efficiency."

And, while Green's comments to a Chicago railroad/supplier audience were mainly freight-oriented, he is not giving up on the market for passenger-carrying equipment.

N&W chief appraises labor role in financial betterment

While Norfolk & Western is looking for better financial results this year, any improvement probably will not come from work-rules changes that might be expected in the wake of the 1971 agreement with the United Transportation Union. John P. Fishwick, president and chief executive officer, told financial analysts last week that procedures for achieving greater productivity, involving the operating unions, are not only very complicated and time consuming but also that short-term financial benefits cannot be anticipated.

Fishwick cited the 7½ years it took N&W to win the option of operating road trains into either of its Chicago-area yards (one ex-Wabash, the other ex-Nickel Plate) and to allow inter-yard transfers to handle cars in both directions. Negotiations started in 1964 following the merger and culminated in an arbitration award in favor of the railroad early this month. But, said Fishwick, "we paid for this in 1964." He added that the 1971 UTU agreement was significant primarily because it did incorporate the productivity principle in train-service negotiations.

For the first time in almost a year there has been an upturn in carloadings; December 1971 was 1.1% higher than December 1970 and the first 20 days of January 1972 showed a 2.4% improvement over the corresponding 1971 period. For 1971 N&W had a 9% increase in net income (to $77.7 million) on a 1% decline in revenues (the result of the UTU and miners' strikes). Dereco, which controls Erie Lackawanna and Delaware & Hudson, reported a net loss of $2.7 million for 1971, compared with a loss of $11.2 million in 1970.

VAPOR NEWMATIC TOILET

simple

- Clean
- Sanitary
- Self contained

try it...

More than 30 railroads * have... and

they like it!

* List of Newmatic users provided upon request

Write: Transportation Systems Division Vapor Corporation
6420 West Howard Street, Chicago, Illinois 60648
In Canada, Vapor Canada Limited

VAPOR CORPORATION SINGER TRANSPORTATION EQUIPMENT

Circle 40 on coupon page 83

WHO'S WHO IN RAILROADING AND RAIL TRANSIT

How pleased you are when somebody knows who you are, where you've been, what you're doing! How pleased other people are when you know something about them!

You'll find the new 17th edition of "Who's Who in Railroading and Rail Transit" a gold mine of information about many a man important to you.

ORDER YOUR ADVANCE COPY TODAY!

17th Edition at the Printers

WHO'S WHO/350 Broadway, New York, N.Y. 10013

Please reserve _____ copy(s) of the 17th edition of "WHO'S WHO IN RAILROADING AND RAIL TRANSIT"

☐ I enclose $23.00 per copy in full payment

☐ Bill me $25.00 per copy plus postage

NAME _____

STREET _____

CITY _____

STATE _____ ZIP _____

Now—a heavy duty, high production Welding System with AC power designed specifically for the Railroad Industry.

Model TE 500-12 (pictured above)

A six-man gang using the TE 500-12 POWER PLANT in combination with Teleweld's electric powered SURFACE and SLOTTING GRINDERS and propane fueled RAIL END HEATERS can build up chipped and battered rail ends at production rates of 15 to 30 joints per hour of on-track time.

Actual production depends on length and depth of batter and the severity of chipped ends.

Using either a stick electrode or TELEWELD'S specially formulated core wire with a semi-automatic wire feeder, quality comparable to the best end hardened rail is readily obtained.

The TELEWELD system for track welding is based on over 40 years experience in the maintenance and repair of rail ends, frogs, crossings and switchpoints with electric arc welding processes. The knowledge and skills developed from this experience are available to the Railroad Industry.

Write for details.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

TELEWELD INC.

416 North Park Street, Streator, Ill. 61364
Phone (815) 672-4561

Circle 41 on coupon page 83

People

BURLINGTON NORTHERN. — **John C. Ashton,** vice president, Washington, D.C., appointed to the newly created position of vice president, community relations, at St. Paul, effective Feb. 1.

R. P. Ortlip named assistant vice president, financial planning, finance department, St. Paul.

ERIE LACKAWANNA—W. B. Wagner appointed supervisor of piggyback operations, Chicago.

FRISCO.—James F. Wiggins, cashier, appointed assistant treasurer, to succeed **Arthur P. Rall,** who retired Jan. 31 after 50 years of railroad service.

GULF, MOBILE & OHIO.—Gary H. Hearn promoted to district freight representative, Pittsburgh, Pa.

SANTA FE.—Effective Jan. 1, **C. E. Rollins,** assistant general manager, will have jurisdiction over the entire Coast Lines, with headquarters at Los Angeles.

F. L. Elterman named assistant general manager—personnel, Los Angeles.

James E. Spier, assistant to general manager, Los Angeles, retired Dec. 31 after 43 years' service.

Effective Feb. 1, **J. B. Hardin,** general manager—market research, named assistant general manager—pricing, Chicago, to succeed **J. G. Roberts,** who retires after 43 years' service. Mr. Hardin's successor is **William F. Hennessey,** manager—market research, who in turn is replaced by **A. J. Lawson,** assistant manager—market research.

SOO LINE.—In a reorganization of the Engineering Department, effective Jan. 1, three engineering divisions consolidated into two regions, one west of the Twin Cities with headquarters at Minneapolis and the other east, with headquarters at Stevens Point, Wis. **Bernard R. Prusak** named to the newly created position of assistant chief engineer. **Gerald A. Nilsen** becomes system engineer, Minneapolis. **John P. Gannon** appointed regional engineer, Eastern Region, and **William J. Egan,** regional engineer, Western Region.

TEXAS & PACIFIC.—E. L. Dutton, assistant general freight agent, Dallas, retired Jan 1 after 46 years of service.

UNION PACIFIC.—Homer H. Noar named manager and **Richard J. Pittenger,** assistant manager, commissary services, Omaha.

SUPPLY TRADE

A. F. Sarosdy, vice president and assistant to president, **Pittsburgh Forgings Co.,** Coraopolis, Pa., has been elected president, succeeding **Edwin Hodge, Jr.,** who will remain with the company as chairman. Mr. Hodge is also chairman of the Neville Chemical Co.

Willis E. Roe has been elected chairman

1 MILLION CAR SETS!

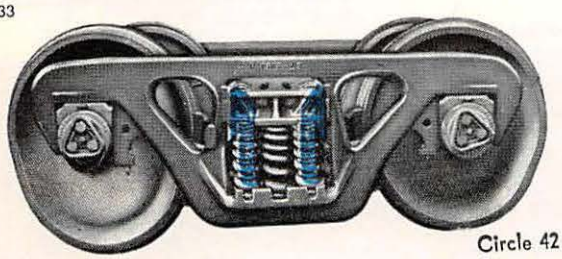
Now, 1,000,000 car sets of Barber Stabilized Trucks have been installed by more than 150 major railroads and private car lines throughout the world . . . on cars that roll *billions* of trouble-free miles annually. A remarkable vote of confidence from these many users . . .

Akron, Canton & Youngstown
Alabama Power
Alaska Railroad
Alcoa
Algoma Central Railway
Allard Lake Mines
Allied Chemical Corp.
Alton & Southern
Aluminum Co. of Canada
Aluminum Co. of Jamaica
American Car & Foundry (ACF Industries)
American Celanese
American Refrigerator Transit
Anaconda Copper
Atchison, Topeka & Santa Fe
Atlanta & West Point
Baltimore & Ohio Railroad
Bangor & Aroostook
Bessemer & Lake Erie
Bethlehem Steel Corp.
Birmingham Southern
Boise Cascade Corp.
British American Oil Co.
Burlington Northern
Burlington Refrigerator Express
Canadian Car & Foundry
Canadian General Transit Co.
Canadian National Railways
Canadian Pacific Railway
Celtran, Inc.
Central of Georgia
Chattahoochee Industrial Railroad
Chesapeake & Ohio Railway
Chicago & Eastern Illinois
Chicago & North Western
Chicago & Western Indiana
Chicago Great Western
Chicago, Milwaukee, St. Paul & Pacific
Chicago, Rock Island & Pacific
Cleveland Electric Illuminating Co.
Clinchfield Railroad
Colorado & Southern
Colorado Fuel & Iron
Columbia Geneva Steel
Columbian Carbon
Columbus & Greenville
Consolidation Coal
Constructora Nacional
Cudahy Packing Co.
Dairy Shippers Dispatch
Delaware & Hudson
Denver & Rio Grande Western
Detroit Edison Co.
Detroit & Mackinac
Detroit & Toledo Shore Line
Detroit, Toledo & Ironton
Dominion Iron & Steel
Dominion Steel & Coal
Dow Chemical Co.
Du Pont de Nemours & Co.
Elgin, Joliet & Eastern
Erie Lackawanna Railway
Ethyl Corporation
Florida East Coast Railway
Ford Pool
Fruehauf Corp.
Fruit Growers Express
General American Transportation Corp.
General Electric Co.
Genesee & Wyoming Railroad
Georgia Power Co.
Georgia Railroad
Goodyear Tire & Rubber Co.
Grand Trunk Western
Great Lakes Steel
Green Bay & Western Railroad
Greenville Steel Car Co.
Gulf, Mobile & Ohio
Gunderson, Inc.
Hamersley Iron, Pty.
Hammermill Paper Co.
Illinois Central Railroad
Illinois Terminal Railroad
Indiana Harbor Belt
International Nickel Co., Ltd.
Iron Ore Co. of Canada
Kansas City Power Co.
Kansas City Southern Railway Co.
Kellogg Co.
Lehigh & New England Ry. Co.
Linde Air Products
Lion Oil Co.
Louisville & Nashville Railroad
Lox Equipment Co.
Maine Central Railroad
McCloud River Railroad
Merchants Despatch Transportation
Missouri-Kansas-Texas
Missouri Pacific Railroad
Monon Railroad
Monsanto Co.
Napanee Industries
National Railways of Mexico
National Steel Car Corp.
Norfolk & Western
North American Car Corp.
North American Masonite
Northern Alberta Railways
Ontario Northland
Ortner Freight Car Co.
Pacific Car & Foundry
Pacific Fruit Express
Pacific Great Eastern
Pacific Power & Light
Peabody Coal Co.
Penn Central Transportation
Pennsylvania Power & Light
Phillips Petroleum
PPG Industries
Products Tank Car
Public Service Co. of Indiana
Pullman-Standard
Pullman Transport Leasing Co.
Quebec Iron & Titanium Corp.
Quebec North Shore & Labrador
Railway Express Agency
Reading Company
Reynolds Metals Co.
Richmond, Fredericksburg & Potomac
Richmond Tank Car
Roberval & Saguenay Railway
St. Louis-San Francisco Railway
St. Louis Southwestern Railway
Sandersville Railroad
Seaboard Coast Line
Shell Chemical
Shippers Car Line
Soo Line Railroad
Southern Railway
Southern Pacific Transportation
Steel Co. of Canada
Texas & Pacific Railway
Texas Gulf Sulphur Co.
Texas Mexican Railway
Texas Natural Gas
Texas-New Mexico Railway
Toledo, Peoria & Western
Toronto, Hamilton & Buffalo
Trailer Train Co.
Union Carbide Corp.
Union Pacific Railroad
Union Tank Car Co.
United States Railway Equipment Co.
United States Steel Corp.
U.S. Army & Navy
Wabush Lake Mines Railway
Western Fruit Express
Western Maryland Railway
Western Pacific Railroad
Western Ry. of Alabama
Weyerhaeuser Co.
White Pass & Yukon Route
Wisconsin Power & Light

You, too, can save money on reliable stabilization for your freight cars!

"Talk to the Man from Barber"

6033



BARBER

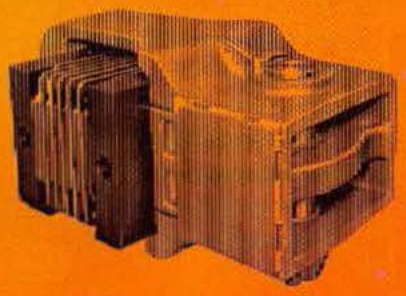
STANDARD
CAR TRUCK COMPANY
CHICAGO • PHILADELPHIA • MONTREAL
CABLE: CARTRUCKS

Circle 42 on coupon page 83

Ideation & Innovation start with a big "I"...

...this big "I" is an ultramodern 1,200,000 pound compression-tension machine located at the hub of unique testing equipment in the National Castings Technical Center. National's technical, engineering and design groups are first with problem solving ideas and innovations.

A National "I" Locomotive Draft Gears



NC-390 and NC-391 rubber-cushioned draft gears were developed for durability in use with higher horsepower locomotives and heavier trains. National's innovators engineered these cushioning gears to outperform those which have been the standards for diesel-electric locomotives. Reduced maintenance . . . 5-times longer service life . . . compact.

NATIONAL CASTINGS DIVISION
Midland-Ross Corporation

SOUTH DOCK STREET • SHARON, PENNSYLVANIA 16146

Sales offices located in Chicago, Cleveland, Ohio; Philadelphia, Richmond, Va. and San Francisco.

1 MILLION CAR SETS!

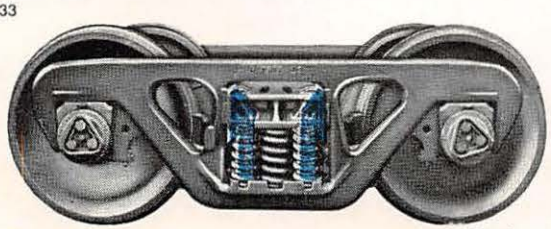
Now, 1,000,000 car sets of Barber Stabilized Trucks have been installed by more than 150 major railroads and private car lines throughout the world . . . on cars that roll *billions* of trouble-free miles annually. A remarkable vote of confidence from these many users . . .

Akron, Canton & Youngstown
Alabama Power
Alaska Railroad
Alcoa
Algoma Central Railway
Allard Lake Mines
Allied Chemical Corp.
Alton & Southern
Aluminum Co. of Canada
Aluminum Co. of Jamaica
American Car & Foundry (ACF Industries)
American Celanese
American Refrigerator Transit
Anaconda Copper
Atchison, Topeka & Santa Fe
Atlanta & West Point
Baltimore & Ohio Railroad
Bangor & Aroostook
Bessemer & Lake Erie
Bethlehem Steel Corp.
Birmingham Southern
Boise Cascade Corp.
British American Oil Co.
Burlington Northern
Burlington Refrigerator Express
Canadian Car & Foundry
Canadian General Transit Co.
Canadian National Railways
Canadian Pacific Railway
Celtran, Inc.
Central of Georgia
Chattahoochee Industrial Railroad
Chesapeake & Ohio Railway
Chicago & Eastern Illinois
Chicago & North Western
Chicago & Western Indiana
Chicago Great Western
Chicago, Milwaukee, St. Paul & Pacific
Chicago, Rock Island & Pacific
Cleveland Electric Illuminating Co.
Clinchfield Railroad
Colorado & Southern
Colorado Fuel & Iron
Columbia Geneva Steel
Columbian Carbon
Columbus & Greenville
Consolidation Coal
Constructora Nacional
Cudahy Packing Co.
Dairy Shippers Dispatch
Delaware & Hudson
Denver & Rio Grande Western
Detroit Edison Co.
Detroit & Mackinac
Detroit & Toledo Shore Line
Detroit, Toledo & Ironton
Dominion Iron & Steel
Dominion Steel & Coal
Dow Chemical Co.
Du Pont de Nemours & Co.
Elgin, Joliet & Eastern
Erie Lackawanna Railway
Ethyl Corporation
Florida East Coast Railway
Ford Pool
Fruehauf Corp.
Fruit Growers Express
General American Transportation Corp.
General Electric Co.
Genesee & Wyoming Railroad
Georgia Power Co.
Georgia Railroad
Goodyear Tire & Rubber Co.
Grand Trunk Western
Great Lakes Steel
Green Bay & Western Railroad
Greenville Steel Car Co.
Gulf, Mobile & Ohio
Gunderson, Inc.
Hamersley Iron, Pty.
Hammermill Paper Co.
Illinois Central Railroad
Illinois Terminal Railroad
Indiana Harbor Belt
International Nickel Co., Ltd.
Iron Ore Co. of Canada
Kansas City Power Co.
Kansas City Southern Railway Co.
Kellogg Co.
Lehigh & New England Ry. Co.
Linde Air Products
Lion Oil Co.
Louisville & Nashville Railroad
Lox Equipment Co.
Maine Central Railroad
McCloud River Railroad
Merchants Despatch Transportation
Missouri-Kansas-Texas
Missouri Pacific Railroad
Monon Railroad
Monsanto Co.
Napanee Industries
National Railways of Mexico
National Steel Car Corp.
Norfolk & Western
North American Car Corp.
North American Masonite
Northern Alberta Railways
Ontario Northland
Ortner Freight Car Co.
Pacific Car & Foundry
Pacific Fruit Express
Pacific Great Eastern
Pacific Power & Light
Peabody Coal Co.
Penn Central Transportation
Pennsylvania Power & Light
Phillips Petroleum
PPG Industries
Products Tank Car
Public Service Co. of Indiana
Pullman-Standard
Pullman Transport Leasing Co.
Quebec Iron & Titanium Corp.
Quebec North Shore & Labrador
Railway Express Agency
Reading Company
Reynolds Metals Co.
Richmond, Fredericksburg & Potomac
Richmond Tank Car
Roberval & Saguenay Railway
St. Louis-San Francisco Railway
St. Louis Southwestern Railway
Sandersville Railroad
Seaboard Coast Line
Shell Chemical
Shippers Car Line
Soo Line Railroad
Southern Railway
Southern Pacific Transportation
Steel Co. of Canada
Texas & Pacific Railway
Texas Gulf Sulphur Co.
Texas Mexican Railway
Texas Natural Gas
Texas-New Mexico Railway
Toledo, Peoria & Western
Toronto, Hamilton & Buffalo
Trailer Train Co.
Union Carbide Corp.
Union Pacific Railroad
Union Tank Car Co.
United States Railway Equipment Co.
United States Steel Corp.
U.S. Army & Navy
Wabush Lake Mines Railway
Western Fruit Express
Western Maryland Railway
Western Pacific Railroad
Western Ry. of Alabama
Weyerhaeuser Co.
White Pass & Yukon Route
Wisconsin Power & Light

You, too, can save money on reliable stabilization for your freight cars!

"Talk to the Man from Barber"

6033



BARBER
STANDARD
CAR TRUCK COMPANY
CHICAGO • PHILADELPHIA • MONTREAL
CABLE: CARTRUCKS

Circle 42 on coupon page 83

John C. Ashton
BN

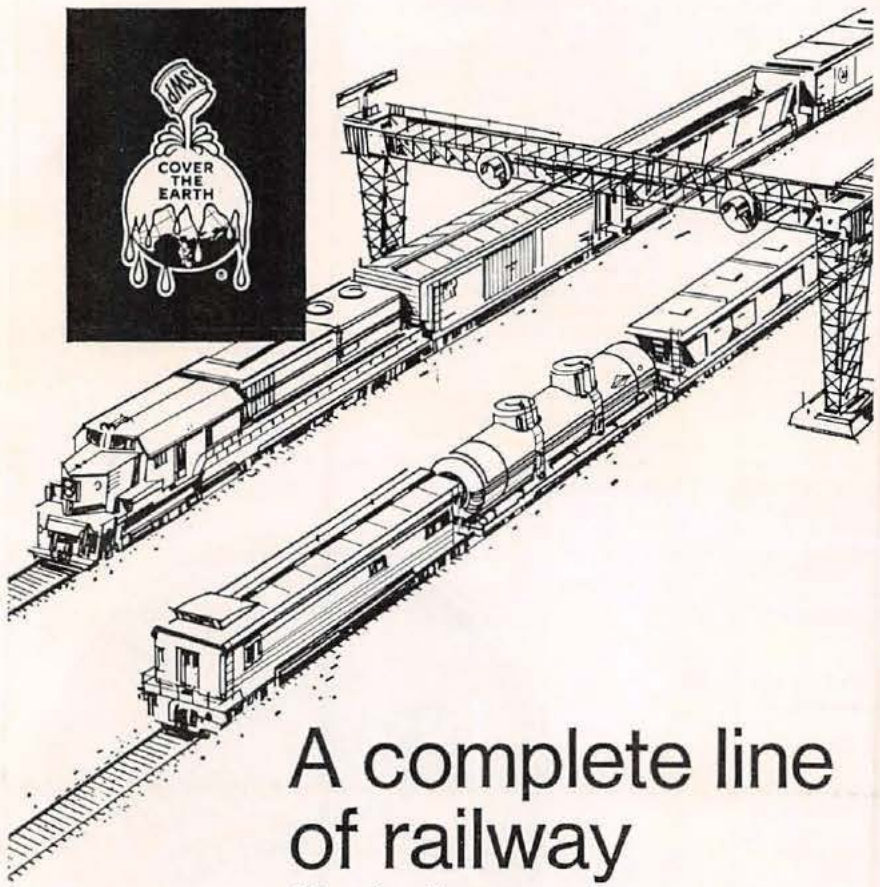
J. W. Thomas
Timken

James E. McCort
Timken

F. J. Hungelmann
Timken

Thos. R. Remington
GSI

James A. Van Sant
GSI



A complete line of railway finishes for freight and passenger cars

SHERWIN-WILLIAMS
CHEMICAL COATINGS DIVISION
101 PROSPECT AVE., N.W. • CLEVELAND, OHIO 44115
Circle 43 on coupon page 83

of the board, **Aldon Co.**, Chicago. **Ralph V. Switzer** succeeds Mr. Roe as president of the company.

J. W. Thomas, assistant general manager—sales, Railroad Division, **Timken Co.**, Canton, Ohio, promoted to general manager—sales, succeeding **James E. McCort,** named consultant—sales of the division. **Frank J. Hungelmann,** manager—sales promotion, Railroad Division, promoted to assistant general manager—sales.

Thomas R. Remington, vice president-operations, **General Steel Industries,** and **James A. Van Sant,** president, Flex-O-Lite Division, St. Louis, have been promoted to new positions as group vice presidents of GSI.

Effective Feb. 15, general offices of the **Railweld Division, Holland Co.,** will be moved from Homewood, Ill., to 1020 Washington Avenue, Chicago Heights, Ill. 60411.

Emmett D. Quan, vice president of operations, **Trailmobile Division, Pullman Incorporated,** has retired after 23 years of service.

Ted W. Harbs has been appointed sales representative, new car sales, **Berwick Forge & Fabricating,** St. Paul, Minn., covering the Twin Cities and Omaha area, according to an announcement of **James C. Rodgers,** director of marketing, Berwick, Pa.

George L. Becht has been appointed manager of engineering, **Buffalo Brake Beam Co.,** Lackawanna, N.Y., succeeding **S. G. Peterson,** retired.

OBITUARY

Robert S. Hobson, retired general superintendent, **Elgin, Joliet & Eastern,** died Jan. 5 at his home in St. Petersburg, Fla.

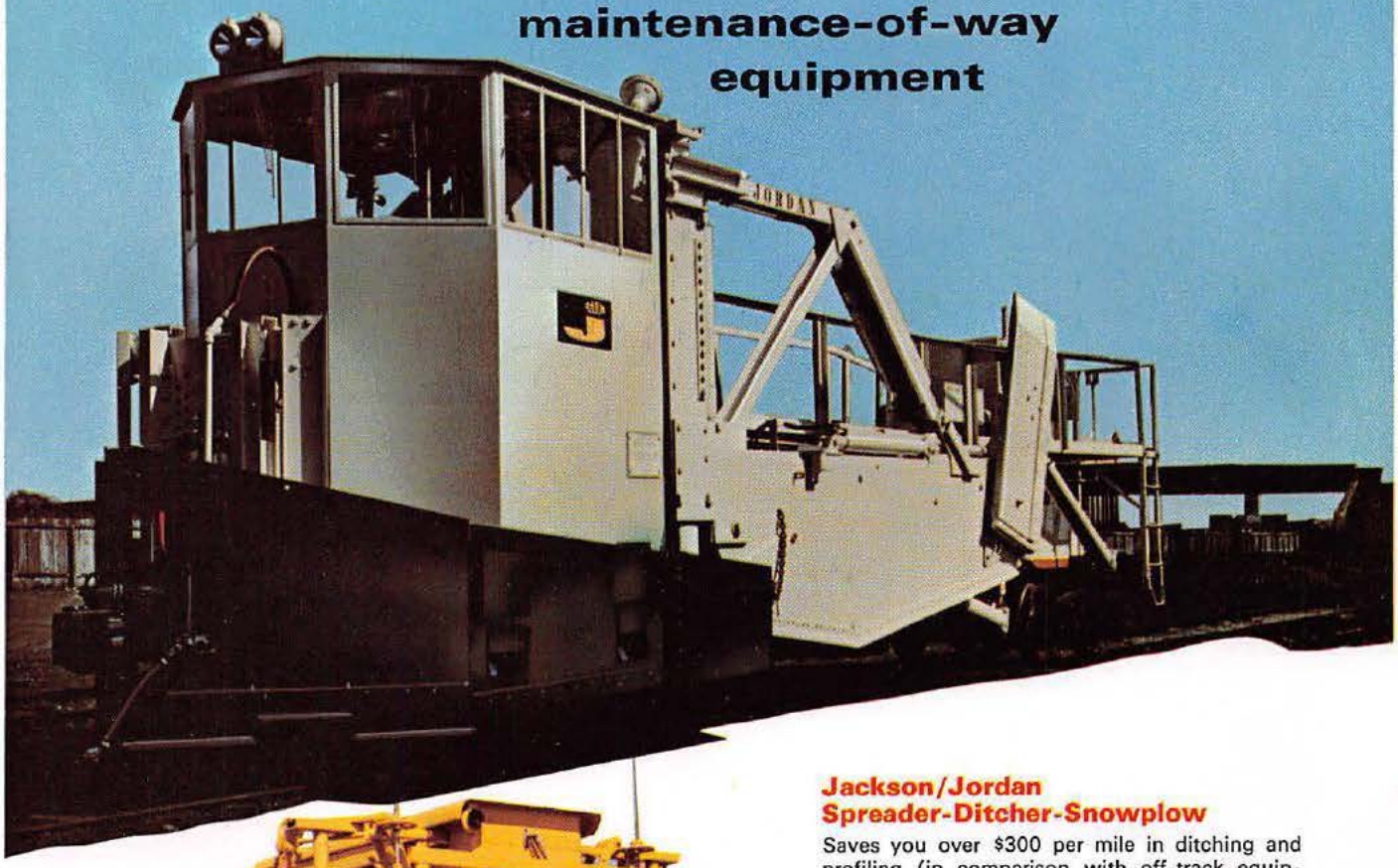
John V. Janes, vice president, **Gross & Janes Co.,** St. Louis, Mo., died Jan. 6. He was also vice president and treasurer of **Petrolite Corp.**

Thomas W. Potter, retired vice president of operations, **Journal Box Servicing Corp.,** died Jan. 5 in Salem, Va.

Stanley R. Voas, 62, solicitor for North and South Dakota, **Milwaukee,** Aberdeen S.D., died Jan. 7 in Los Angeles.

Jackson/Jordan

for ADVANCE DESIGN, HIGH PERFORMANCE maintenance-of-way equipment



Jackson/Jordan Spreader-Ditcher-Snowplow

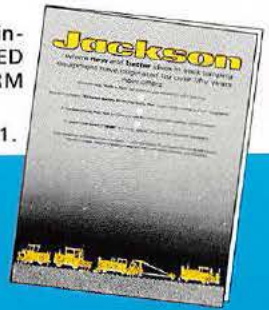
Saves you over $300 per mile in ditching and profiling (in comparison with off-track equipment). Jordans have been known for years as the most efficient and economical movers of huge amounts of material.

Jackson Model 2300 Tamper

Reliable, high performance unit for every-day use inspot or production tamping. As a switch tamper it gets into those tough areas other units miss.

Jackson/Jordan makes it easier than ever to have an advance design, high performance maintenance-of-way fleet. Take advantage of our new TRADE-IN PLAN . . . exclusive WARRANTED MACHINE REMANUFACTURING PLAN . . . CUSTOM LEASING PLAN . . . or SHORT TERM RENTAL PROGRAM.

Write today for new data on high performance Jackson/Jordan equipment. Ask for Brochure R1.



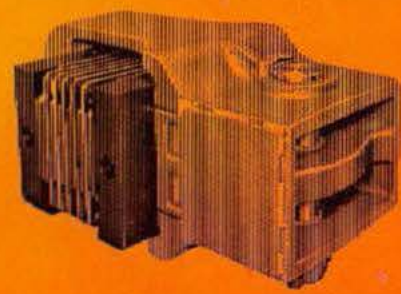
Jackson corp.

Lansing, Illinois 60438

Jackson Railway Equipment Co. • Jordan Company

Ideation & Innovation start with a big "I"...

A National "I" Locomotive Draft Gears



NC-390 and NC-391 rubber-cushioned draft gears were developed for durability in use with higher horsepower locomotives and heavier trains. National's innovators engineered these cushioning gears to outperform those which have been the standards for diesel-electric locomotives. Reduced maintenance . . . 5-times longer service life . . . compact.

. . . this big "I" is an ultramodern 1,200,000 pound compression-tension machine located at the hub of unique testing equipment in the National Castings Technical Center. National's technical, engineering and design groups are <u>first</u> with problem solving ideas and innovations.

NC NATIONAL CASTINGS DIVISION
Midland-Ross Corporation MR

SOUTH DOCK STREET · SHARON, PENNSYLVANIA 16146

Sales offices located in Chicago; Cleveland, Ohio; Philadelphia; Richmond, Va. and San Francisco.

Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Jan. 15 totaled 466,632 cars, according to the Association of American Railroads. This was an increase of 37,030 cars, or 8.6%, compared with the previous week, and a decrease of 34,921 cars, or 7.0%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Jan. 15 are estimated at 13.9 billion, a decrease of 2.5% below the corresponding week of 1971.

REVENUE FREIGHT CARLOADINGS

Commodity	Jan. 15 week	Jan. 8 week	Jan. 1 week
Grain	24,392	20,673	17,153
Farm products	18,303	17,543	14,986
Metallic ores	19,683	17,937	16,382
Coal	88,826	85,003	89,422
Crushed stone, gravel & sand	19,449	18,889	16,174
Nonmetallic minerals	8,411	8,152	7,090
Grain mill products	19,209	17,531	15,538
Food and kindred products	24,287	22,379	21,306
Primary forest products	21,335	20,550	18,910
Lumber & wood products (except furniture)	15,010	14,057	11,942
Pulp, paper & allied products	22,211	21,468	16,663
Chemicals & allied products	27,349	24,590	23,079
Petroleum products	9,843	9,074	8,180
Stone, clay & glass products	16,575	15,259	14,847
Coke	6,558	6,542	5,621
Metals & products	21,123	19,236	16,683
Motor vehicles & equipment	23,809	19,436	11,922
Waste & scrap materials	13,565	11,257	9,256
Forwarder & shipper assn. traffic	5,362	4,860	4,385
All other carloads	60,831	54,725	49,957
LCL traffic	501	441	322
Total cars loaded	466,632	429,602	389,818
CUMULATIVE TOTAL, 2 weeks	1972	1971	1970
	896,234	955,761	950,007
Estimated revenue ton-miles (billions) 2 weeks	26.6	27.2	26.6

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Jan. 8 totaled 20,623 cars (1.8% below the corresponding week last year) and 33,758 trailers or containers (up 3.3% from 1971).

In addition to freight, 2,037 cars carrying 3,183 trailers or containers of mail and express traffic were handled piggyback.

IN CANADA

10 days ending	Tons of Revenue Freight	Cumulative Totals
Dec. 31, 1971	4,303,671	212,034,591
Dec. 31, 1970	4,435,353	207,210,962

FREIGHT-TRAIN CARS

● *Chesapeake & Ohio/Baltimore & Ohio.*—Announced a program to build 800 open-top, 100-ton capacity gondola cars at their Raceland, Ky. shops. The $12-million order is an important portion of C&O/B&O's 1972 car-building program at Raceland. Work on the cars will begin by March 1; the entire order is scheduled for completion by Sept. 21.

CAPITAL EXPENDITURES

● *Burlington Northern.*—1972 improvement program will involve expenditure of $171 million ($3 million higher than originally announced because of late delivery of 10 locomotive units). The breakdown: $105 million for motive power and new and rebuilt freight cars; $52 million for road improvements; and $14 million for other improvements.

NEW FACILITIES

● *Burlington Northern.*—Ordered 123 solid-state WABCO 3R two-way radios for installation on locomotives and cabooses.

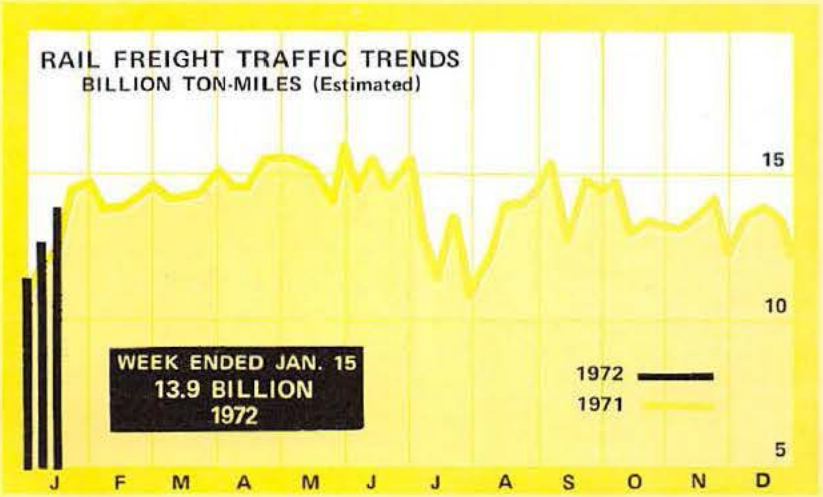
● *Illinois Central.*—Ordered from General Railway Signal materials to upgrade its Markham Yard and East St. Louis yard with the new type E160 electric car retarder, which is designed to handle extra-heavyweight cars.

● *Norfolk & Western.*—Ordered 367 WABCO three-watt portable two-way radios which use lantern batteries, operate on two channels and have bright yellow cases to insure ready identification. They are for use on cabooses.

● *Seaboard Coast Line.*—Awarded a contract for construction of a new railroad bridge across Deep River at Moncure, N.C., to Columbus Contractors, Inc. The job will cost about $1 million. The new bridge will be 565 feet long, 50 feet high and will be some 400 feet downstream from the existing bridge; its superstructure will be entirely below the rail. Completion is expected in the fall of 1972.

FOREIGN

● *Malaysia.*—Will use proceeds of a $16-million World Bank loan to help finance a $23-million railway modernization program which will include locomotives and freight cars.



Moving Freight

Rate increases generate improvement funds

Funds generated by recent freight-rate increases are being used by U.S. railroads for improvements ranging from new cars and locomotives to a study of a national freight-car information system. AAR Vice President R. R. Manion, Operations and Maintenance Department, cited specific examples of changes since July 1971 in the third of a series of reports filed with the ICC. Manion emphasized that the newest presentation "again confirms that there is no lack of motivation on the part of the railroads to improve service." He stressed the need for cooperation by railroads, shippers and government in establishing methods for monitoring service, adding that a task force created by the AAR Board of Directors is due to report shortly on its study of the feasibility of establishing a system that will optimize equipment utilization.

Garbage disposal by rail?

The City of Toronto, which now burns its garbage in eight incinerators, is looking for a better method of disposal—and railroads may provide the answer. Ontario Environment Minister George Kerr, who has ordered the closing of two of Toronto's incinerators, has initiated a study which contemplates the shredding, recycling or other treatment of garbage and then hauling of the unsalable residue in closed rail cars to landfill sites. If the idea works, says Kerr, it will be expanded to include other Ontario cities.

PC expands fast-freight fleet

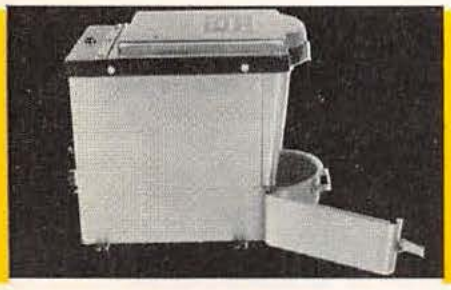
Penn Central is steadily expanding its fast freight operations. Overnight piggyback service in both directions between Chicago and Detroit has brought to 42 the number of high-speed trains PC now operates for trailers and containers. Simultaneously, a new through train for carload traffic has been inaugurated between East St. Louis, Ill., and Harrisburg, Pa., with connections to Washington, Baltimore, Philadelphia and New Jersey points. PC now has double daily service on comparable schedules with no intermediate classification between St. Louis and Enola Yard. "This is another step in our service improvement program and is an outgrowth of our continuing studies of the needs of our freight customers," says Paul Funkhouser, senior vice president—sales and marketing.

Rail freight's future: Intermodal and unit trains

In the future, rail systems will have two major freight-handling functions—handling bulk materials and serving as a component in intermodal transportation systems. Dr. R. A. Bandeen, vice president of Canadian National's Great Lakes Region made these predictions at the annual meeting of the Canadian Institute of Traffic and Transportation. To this end, said Bandeen, "CN is going to become more and more involved in the operation of non-rail transport systems. We are going to become as proficient at operating highway services and pipelines as we are at operating a railroad." The proliferation of transport modes has forced railways to think "more in terms of total transportation and eventually as transportation companies, rather than railways." Rail operations will continue to grow in technical sophistication, specializing to an increasing degree in the movement of bulk commodities and raw or partially finished materials. "As a consequence," said Bandeen, "unit trains—which are ideally suited to moving this kind of freight—will become more commonplace and rail transport will tend to become increasingly automated."

the SOLUTION

to Pollution is Reasonable with MODEL-S



— And that's the way it should be. Purchase of Research Products' new electric-incinerating toilet for locomotives is the most economical way to go because MODEL S uses the electric power of the locomotive to operate (no fuel tanks, no water, no pipes, no chemicals, no costly honey-wagon attendance), and because its servicing is minimal. Servicing of Research Products' Model S is the most simple, most economical of any retention toilet because (1) its human waste is incinerated to odorless, bacteria-free ASH, and because (2) that ASH can be emptied from the front of its removable ASH drawer. When you're making a check list on toilets, remember only Model S uses throughout heavy–gauge stainless steels and nickels, has CANDOR odor catalyst, incorporates a COVER/LID, gives you venting by either blower or ejector principle.

SOLUTION, SERVICE ECONOMY, PRODUCT QUALITY/RELIABILITY MAKE MODEL-S YOUR BEST BUY.

RESEARCH PRODUCTS MANUFACTURING COMPANY

TELEPHONE 214/358-4238 TELEX CODE 730-161 2639 ANDJON ST. DALLAS, TEXAS 75220

IN CANADA . . . RESEARCH PRODUCTS / BLANKENSHIP OF CANADA, LTD. 18 CANSO ROAD, REXDALE (TORONTO) ONTARIO

RP7101

Circle 46 on coupon page 83

ADVERTISERS INDEX

ACF Industries, Inc. 78-79
ACI Systems Corp. 12
American Telephone & Telegraph Company 51
Atchison, Topeka & Santa Fe Railway System .. 56-57
Automation Industries, Inc. 6
Buffalo Brake Beam Company 22
C F & I Steel Corporation 58-59
Cardwell Westinghouse Company 9
Consolidated Freightways 10
Datalog Division 20
Dresser Transportation Equipment Division 17
Foster Co., L.B. 43
FreightMaster 85
Fruehauf Railcar Division 16
General Electric Company 36
General Railway Signal Co. 77
Greenville Steel Car Co. 26
Griffin Wheel Company 19
Holland Company, The 82
Hurd Aerial Surveys, Inc., Mark 106
International Car Co. 18
Intma International, Inc. 91
Jackson Vibrators, Inc. 101
Kansas City Southern Lines 54
Kemlite Corp. 39
Keystone Railway Equipment Co. 27
McNab Incorporated 14
Missouri Pacific Lines 76
MLW-Industries 4
National Castings Division 102
Palms, J. X. 93
PPG Industries ..... IFC
Pullman-Standard ..... BC
Railway Educational Bureau 107
Railway Maintenance Corporation 44
Research Products Mfg. Co., Inc. 105
Seaboard Coast Line Railroad 53
Servo Corporation of America 60-61
Shell Oil Company 64-65
Sherwin-Williams Co., The 100
Southern Pacific Transportation Co. 62-63
Standard Car Truck Co. 99
Standard Steel 32
Stanray Corporation ..... IFC
Stucki Company, A. 28
Tamper 24-25
Teleweld, Inc. 98
Thrall Car Manufacturing Co. 23
Timken Company, The 94
Transco, Inc. 21
Union Pacific Railroad 3
United States Steel Corp. 80-81
Universal Railway Devices Company 55
Vapor Corp 93, 95, 97
WABCO-Signal & Communications Div. 40
Whos Who in Railroading 97
Wix Corporation 95

THE *Mark Hurd*

DATA RETRIEVAL AND MAPPING SYSTEM for RAILROADS

AN ACCURATE, FAST, ECONOMICAL SOLUTION FOR STATION AND EVALUATION PLAN REVISION

REDUCES OPERATING COSTS
INCREASES EFFICIENCY

PROVIDES VISUAL INVENTORY
CONSERVES RAILROAD PERSONNEL TIME

RAILROAD PROGRAMS DIVISION
P. O. BOX—469
GOLETA, CALIFORNIA 93017
TEL. 805-967-1261

Mark Hurd AERIAL SURVEYS, INC.
345 PENNSYLVANIA AVENUE
MINNEAPOLIS, MINNESOTA 55426

Circle 50 on coupon page 83

Mechanical Engineer

Versatile in truck designs and general car construction. It is desirable for the prospective candidate to have a good understanding of the electrical considerations in car construction. An equal opportunity employer. Send confidential resume and salary desired to:

Sperry Rail Service
Automation Industries, Inc., Danbury, Connecticut 06810
Attention: P. Van Hemert, Chief Engineer

USEABLE SECOND-HAND RAILROAD CAR REPAIR PARTS
IRON & STEEL SCRAP
RAILS & ACCESSORIES
PLANT DISMANTLING
RAILWAY EQUIPMENT LEASING
RAILWAY CAR PARTS & SUPPLIES
RAILWAY CARS

THE PURDY CO.

Executive Office—
2400 W. 95th St.
Chicago, Ill. 60642—239-4200
BRANCH OFFICE & YARDS
MADISON, ILLINOIS
OAKLAND, CALIF.
LONG BEACH, CALIF
BELLEVUE, WASH

WANTED

Flat Cars
50 Ton-50 Ft.
Large Quantity
Interchange Services

Box 124
c/o Railway Age,
350 Broadway, N.Y., N.Y. 10013

SERVICE ENGINEER

Major supplier is seeking a Service Engineer for the Chicago area. Degree preferred but not required. Experience in freight car design or maintenance required. Must be willing to travel. Submit resume including salary requirements to:

Railway Age
Box 125
350 Broadway, New York, N.Y. 10013

WANTED—USED
CAR WHEEL BORER
CAR WHEEL LATHE

S & S Machinery Co.
140R—53rd Street
Brooklyn, N.Y. 11232
(212) 492-7400
Send for free 40-page machinery catalog.

ALWAYS WELCOME—
EASY TO GIVE

Gift Subscriptions to RAILWAY AGE. Your railroad customers will appreciate and remember your goodwill gesture every time an issue arrives (P.S. No time like the present to write for group rates.) John E. Rogers, RAILWAY AGE, 350 Broadway, New York, N.Y. 10013

Train Billing Repair Card Write-Up Men

How many Repair Cards are rejected each month? To reduce that number, sign up for our new home study course for Write-Up Men.

This course consists of fifteen lessons as follows:

1. Purpose of the Rules of Interchange and Care of Foreign Cars.
2. Air Brake Equipment.
3. General Regulation for Lubrication.
4. Components of Journal Box.
5. Roller Bearings, Adapters and Cartridge Bearings.
6. Wheels and Axles—Components of Trucks.
7. Running Boards—Dome Platforms—Brake Steps—Cross Over Platforms—Repair to Sills.
8. General Repairs and Instructions.
9. Material and Interchange of Freight Cars.
10. Responsibility.
11. General Regulations for Pricing and Billing General Rules.
12. Review of Entire Book.
13. The A.A.R. Billing Repair Card Basics.
14. Practice Problems—Part 1.
15. Practice Problems—Part 2.

The cost is $3.00 per lesson ($45.00 total) and includes a 1971 Field Manual, grading of all examinations and monthly progress report to your Railroad.

Upon satisfactory completion of the course, a diploma will be issued.

Start your course right away by returning the coupon below.

RAILWAY EDUCATIONAL BUREAU
1809 Capitol Avenue, Omaha, Nebraska 68102

Please enroll me in the A.A.R. Billing Repair Card Course. Here is my check for $3.00. I will pay $6.00 per month for seven additional months ($45.00 total). I understand I may cancel at any time.

NAME_____
ADDRESS_____
CITY_____ STATE_____ ZIP_____
RAILROAD_____
TITLE_____

Railmark **Consultants in Corporate Identification Systems, Marketing, Communications Planning, Advertising & Promotion Design. For information, write Railmark Limited, Station Plaza East, Great Neck, N.Y. 11021, U.S.A. Telephone: 212-895-7498 or cable RAILMARK GREATNECKNY.**

2—1969 General Electric U33C-3300 HP 210 TON Diesel/Electric Locomotives ea. $215,000
1—1970 Fairmont W110 "C" Dual Ballast Tamper 15,000

LOCATION: ORANGE, NEW JERSEY
S J GROVES & SONS CO—40 WASHINGTON AVE. SOUTH MINNEAPOLIS, MINNESOTA 55401 (PH: 612-338-6943 #64)

TRACK SUPERVISORS, FOREMEN, AND TRACKMEN. Railroad Contractor has immediate openings for qualified and aggressive personnel free to travel southeastern states. Excellent salary and fringe benefits. Send confidential resume and salary desired to:

Atlas Railroad Construction Company
P. O. Box 844
Winston-Salem, N. C.
or call: 919-722-6709

DCO The De Leuw, Cather Organization CONSULTING ENGINEERS
165 W. WACKER DRIVE • CHICAGO 60601

SUBWAYS • RAILROADS • SIGNAL SYSTEMS • PUBLIC TRANSIT • TRAFFIC • PARKING
HIGHWAYS • BRIDGES • PORT DEVELOPMENT • COMMUNITY PLANNING • URBAN RENEWAL
AIRPORTS • MUNICIPAL WORKS • INDUSTRIAL • ENVIRONMENTAL SCIENCE AND ENGINEERING

BOSTON • BUFFALO • NEWARK • NEW YORK • OKLAHOMA CITY • PHILADELPHIA
PORTLAND, OR. • SAN FRANCISCO • SEATTLE • WASHINGTON, D.C.

CAR, RAILWAY, COAL HOPPER

50 ton cap., 1953, Magor, Model A-3050, side dump, 56½ gauge, 30 cu. yds., 8 Wheel. Used—Excellent Condition.

Send all replies to Railway Age, Box No. 127, 350 Broadway, New York, N.Y. 10013

Advertising Sales Department

Chicago, Ill. 60602
29 E. Madison St.
(312) 641-5815
C. James Fisher—vice president—sales
John M. Brennan
regional sales manager

New York, N.Y. 10013
350 Broadway,
(212) 966-7700
W. Arthur Cubbage
regional sales manager

Pittsburgh, Pa. 15234
300 Mt. Lebanon Blvd.
(412) 341-0844
Ronald M. Giallonardo
regional sales manager

Dallas, Tex. 75206
Noel Page Building
6400 N. Central Expressway
(214) 361-6972
Joseph Sanders

Los Angeles, Cal. 90025
11704 Wilshire Blvd.
(213) 477-4004
Fred Klaner, Jr.
Philip O. Bowers

Sausalito, Cal. 94965
3030 Bridgeway Building
(415) 332-1481
(415) 332-1482
Lewis Vogler & Co.

London S. W. 1, England
01-839 6318
67/68 Jermyn St., St. James's
Max F. Holsinger
Kenneth J. Hendry
Stuart K. Elliott

Manchester 22, England
Haletop
Wythenshawe Civic Center
Ian Goulden

Paris, 8e, France
70 Rue de Ponthieu
Stephen Brown-Joussard
Jean-Claude Lamoine

4 Dusseldorf-Nord
Eitelstrasse 32
Max F. Holsinger,
E. Hillerbrand, Herbert Haibt,
Reinhard Schomburg

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkatsu Bldg.
13, Shiba Park
Minato-Ku
C.H. Yiu, Managing Director

Viewpoint

Mr. Nixon's lukewarm plea for railroads

In his State of the Union message, President Nixon dealt at some length with what he considers to be the most pressing needs in the transportation sector. He expressed concern over last year's maritime and railroad strikes. He was eloquent on the subject of mass transportation, declaring that while highway building "has been . . . our greatest success story in the past two decades . . . now we must write a similar success story for mass transportation in the 1970's." For this reason, he said, he was asking Congress for $1 billion for this purpose in 1972. (He failed to add that Congress last year gave him $900 million for mass transit, of which he permitted the Urban Mass Transportation Administration to spend only $600 million.)

But on a subject that many consider to be the most pressing of all—the future of the railroads—President Nixon was less eloquent, less specific. He contented himself with expressing the hope that the 92nd Congress would accept "our recommendations for revitalizing surface freight transportation . . . including measures both to modernize railway equipment and operations and to update regulatory practices."

It was at best a lukewarm endorsement of an Administration program which has had lukewarm support from the White House at all stages of its tortured life.

The measures to which the President referred are S. 2841 and S. 2842, which came out of the Department of Transportation last November after what our Washington editor then described as "an incredibly lengthy, intra-governmental hassle." Not only was there no White House briefing on this long-awaited package; DOT Secretary John Volpe himself was not even on hand for the announcement. An assistant secretary broke the news to reporters. It hit the newspapers with only the mildest thud.

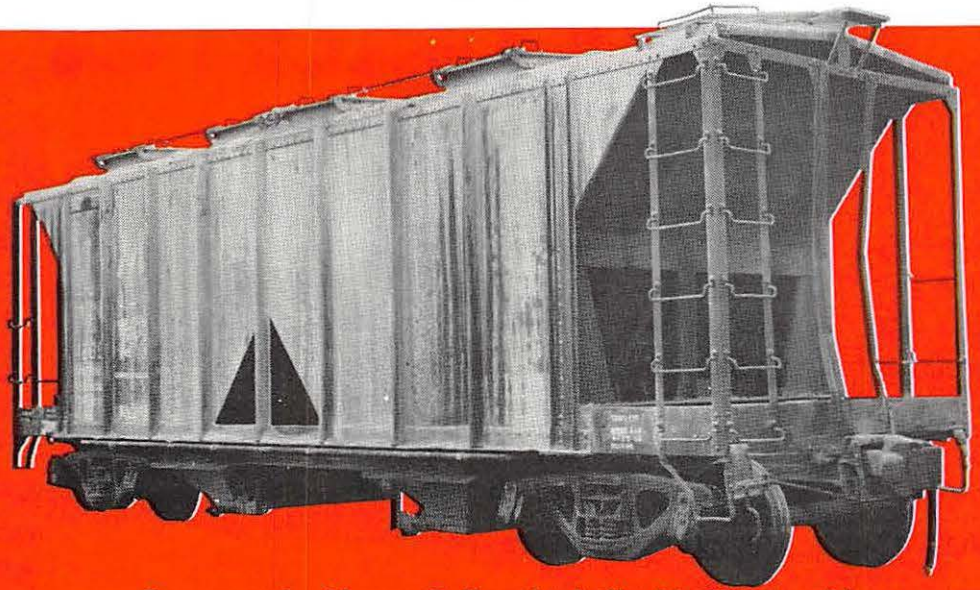
The package is not a bad one. A key provision of S. 2841 would create a $3-billion Federal Railroad Equipment Obligation Insurance Fund to be funded by a 1% premium on the principal of the obligations outstanding. This bill would also establish a $35-million R&D program under the Federal Railroad Administration; and it would prohibit discriminatory taxation of carrier property. The companion bill, S. 2842, would provide speedier line-abandonment procedures for railroads; and establish a "zone of reasonableness" within which rail, truck and water carrier rates can move up or down without ICC approval.

These are the measures which President Nixon "hopes" Congress will accept.

DOES NIXON HIMSELF "BUY" THE PROGRAM?

But before Congress accepts the Nixon Administration's railroad program, there needs to be firmer evidence that the Administration itself accepts it. A special message to Congress would not hurt. That does not seem too much to ask in view of the extent to which the state of the union depends on the state of its transportation system.

Stanray roofs can make your hopper cars more profitable the second time around.



For example, Monon Railroad rebuilt this 20-year old square-hatch car with a Stanray round-hatch roof, a coat of paint and put it back in service, better than ever, at a great savings in time and expense.

Aside from the obvious savings incurred in rebuilding existing cars versus buying new ones, Stanray roofs can even make the rebuilding more profitable.

First of all, our roofs are corrugated. This corrugated design eliminates need for reinforcements. It also means lighter weight and a minimum of assembly work. Another way you save with Stanray is on long range protection. Our integral round-hatch roofs have an extremely low design which deters buildup of corrosive materials around the hatches. So, they'll hold up better over the years than the old-fashion high standing square-hatch roof.

We'll custom build your roof as to material thickness and number of hatches and then give you the option to save additional money. If you wish, we'll ship your roof assembled, including running boards, or we'll knock it down and ship it so that your own people can assemble it.

See why more and more lines are learning that doing business with Stanray is a very profitable way to run a railroad?

STANDARD RAILWAY EQUIPMENT
division of STANRAY CORPORATION
Chicago • Hammond, Indiana

Circle 49 on coupon page 83

The $40 billion alternative.

The near failure of a single railroad, recently, shook our entire economy.

The stopping of rail service for only 24 hours brought the nation to the brink of emergency.

Yet the warnings by the railroad industry that it faces an imminent crisis for survival is met with near silence.

The lack of alarm is ominous.

Maybe no one is listening because they think it is a case of "big business" crying wolf. Maybe others are calm because they expect the government will not let the railroads collapse. But it is not a case of crying wolf. And the government is not acting swiftly enough to prevent a collapse.

The alternative is clear and frightening. It is the nationalization of our railroad system.

And it could be a $40 billion alternative.

In fact, estimates range from over $20 billion to $60 billion as to how much it would cost our government simply to acquire the country's railroad system.

And this is only the beginning of what it would cost the country's taxpayers. Another $36 billion must be spent in the next 10 years to keep plant and equipment operable and to expand and improve it, as the country's growing transportation demands will require.

Then there is the excessive cost of nationalized rail service, as already proven by the highly developed countries who have nationalized their railroads.

In Western Europe and Japan, the taxpayers must add about 20 cents to every dollar taken in by the national railroads. Such a deficit in this country would amount to over $2 billion a year.

But the cost of nationalization does not end here. Taxpayers are also consumers. The freight charges collected by government-owned railroads are 50% and, in some cases, even 100% higher than the costs for similar shipments via U. S. railroads.

The real cost of nationalization must be figured into the price of everything we buy.

Is there another alternative?

Yes.

It is the abolishing of century old laws that are strangling our railroads, that many government officials have admitted are outdated and no longer justified. Laws that are prejudicial to railroads within our total transportation system, that prevent them from freely competing for new business, from ending the causes of huge losses such as unprofitable services, that impose startlingly discriminatory taxes on them and deny them fair participation in government programs for transportation.

These are the alternatives. But, we must choose now...or the choice will be made for us.

This message on behalf of Americans and their railroads appears nationally in leading newspapers, as a public service of **Pullman-Standard,** America's leading builder of rail cars. *Reprints* are available by writing Pullman-Standard Division, Pullman Incorporated, 200 South Michigan Avenue, Chicago, Illinois 60604.

Circle 2 on coupon page 83